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THE PAIDOLOGIST:

THE ORGAN OF THE BRITISH CHILD-STUDY
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VOL. VII.

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EDITORIAL.

This number contains an excellent article by Miss Margaret Drummond, on "Modern Experimental Investigation on the Nature and Laws of Fatigue," in which a good description is given of the experiments made on "fatigue" by Professor Mosso and Dr. Treves, of Turin, and Mlle. Joteyko, of Brussels. We draw our readers' attention to it, because, as the authoress says, "the relation between fatigue of the central nervous system and muscular fatigue is, to teachers especially, perhaps the most important in the whole investigation." It is, certainly, highly important that teachers should be able to detect overstrain and fatigue in the children under their care, and, although the experiments referred to have been made in the laboratories, the time will certainly come when testing intellectual fatigue in children, which up to the present time has given conflicting results, will be attended with more success. Six illustrations have been appended to the Paper, in order to make the meaning of the authoress more clear to the reader.

It is to be hoped that there will be a good attendance of Members at the Annual Conference, which is to be held at Derby on the 11th, 12th and 13th of May. Professor Muirhead, of Birmingham University, is the President, and he will deliver the Presidential Address on the evening of May 11th. Addresses will also be given by Professor Earl Barnes and H. Holman, Esq. Full particulars will be found in this issue.

Members will be interested to know that, as a result of a Meeting at Tunbridge Wells, at which some members of the London Branch delivered addresses, a West Kent Branch has been formed there, with Dr. Hamilton Hall as President, and Miss F. M. Watt as Honorary Secretary.

The question of the amalgamation of the London Branch of the Child-Study Association with the Childhood Society has for some time been under consideration, and as the result of some deliberation on the subject, an arrangement has been made by which the Lectures of the two Societies are to be given at the Parkes Museum, Margaret Street, London. The Lectures commenced in February, and finish in May.

The attention of our readers is called to the circular issued by Dr. Karl Lamfrecht, asking for help in collecting children's drawings. It will be found under the heading "Laboratory."

[*The Editors wish to remind readers that the views expressed in the various papers must not be assumed to coincide in all points with those identified with the Association.*]

Modern Experimental Investigation of the Nature and Laws of Fatigue.

By MARGARET DRUMMOND, M.A.

Fatigue is a state of which we all of us, I fear, think we already know too much. But that is only from one side—from the inside. In ordinary life we are accustomed to regard Fatigue as a sensation. But sensations, as such, it is impossible to compare—it is impossible for two very tired men to tell which is really the more tired. Hence, when exact knowledge is required, when we wish to deal with Fatigue experimentally, we must cease to regard it from what may be called the internal point of view. In order that it may enter the sphere of measurement, we must seek for its external manifestation.

If you stroke the leaf of a sensitive plant to enjoy the rather eerie sight of the shrivelling inward of the leaflets, after several attempts you will find that the leaf will cease to give its characteristic response. In fifteen to thirty minutes an electric fish will respond to irritation by the discharge of an electric shock about a thousand times; try once more, and the response fails you. If you gaze fixedly at a strong light, you can see nothing subsequently for a few seconds; while if you spend an afternoon with men practising at a rifle range, you will probably be deaf for a few hours, or even days, afterwards. These, then, are some of the outward manifestations of Fatigue, and we see that they consist in the cessation of that response to stimuli which is characteristic of the organ in its normal state. The fatigued ear cannot hear; the fatigued eye cannot see.

Fatigue in man is marked by the indisposition to do anything—to move, to think, to exert one's self in any way. If the sensation is localised at all, as it commonly is, especially if produced by physical exertion, it is in the muscles. When a muscle is stimulated, either by the will of its owner or by an electric discharge, a swelling passes like a wave along all its fibres, its girth increases, and, where the conditions permit, its length decreases. Contraction is, then, the specific form of muscular energy, and muscular fatigue shows itself in unwillingness or inability to contract. The gradual onset of fatigue is shown by the decrease in the amount of contraction. When our muscles are in good training, they can go on contracting for a very long time, without any apparent diminution in their power; but if we make them work against resistance—if, for example, we move a heavy weight up and down by bending the elbow, we find that we gradually cease to be able to raise it as high as at first, and that, finally, we become powerless to lift it at all, no matter how great an effort we may make to do so. If a series of strokes were set down, representing the successive heights to which the weight was raised, and if the tops of these strokes were joined, we should obtain what is known as the curve of fatigue.

In 1890, Professor Mosso, the distinguished Italian physiologist, first published a description of an instrument designed by him to register this curve of fatigue. This instrument he called the *Ergograph*. The fore-arm, in a position of slight pronation, is fixed on the instrument, the first and third fingers being enclosed in tubes to prevent movement. Round the second finger is placed a leather loop, to which a cord is attached; this cord passes over a pulley, and at the end of it hangs a weight. The alternate flexion and extension of the finger move the weight up and down, and by a pen connected with the cord these movements are registered on a turning cylinder, in the form of a series of strokes such as those shown in the figures. As the finger grows tired, the strokes become shorter, until they cease altogether. The total work done by the finger is easily calculated by measuring and adding together the successive heights to which the weight has been raised, and multiplying by the value of the weight.

The first interesting discovery that Professor Mosso made by means of this ingenious instrument was that the curve of fatigue varies for different individuals, but is constant for the same one. Two contrasting types are represented in Figures 1 and 2. In the latter the effects of fatigue are manifested very quickly, as is shown by the rapid decrease of the length of the strokes, whereas in the former considerable resisting power is shown, nearly the same level being maintained for some time. The curve of one individual will vary, of course for, cause shown—thus an improvement in general health will make your curve show a better resistance to fatigue; but apart from such causes of variation, your curve will remain the same for years: the tracing you take to-day might have been photographed from the one you took yesterday. Thus Figure 2 represents Dr. Maggiora's constant curve during the years 1884-89, during which time he was working continually in Professor Mosso's laboratory. Figure 3 represents his typical tracing for the period 1890-92. The differences are obvious; the contractions have doubled in number, and the work done, measured in the usual way by multiplying the weight by the height to which it has been raised, *i.e.*, by the sum of the heights of the contractions, is treble in amount. In the following year a similar increase took place both in the number of contractions and the amount of work which the

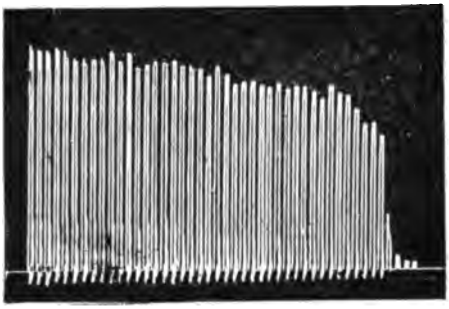


FIG. 1.

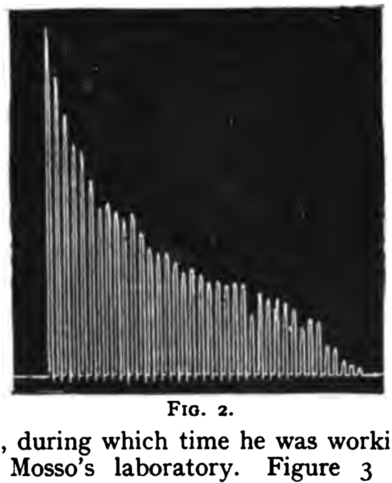


FIG. 2.

muscle performed before exhaustion. These remarkable changes in the curve, Dr. Maggiora attributes entirely to age, as there has been no change in his mode of life, nor, so far as he was aware, any improvement in his general health sufficient to account for them. In 1896 an interesting new development, shown in Figure 4, appeared in the tracing,—it became periodic in form, and might apparently have been continued

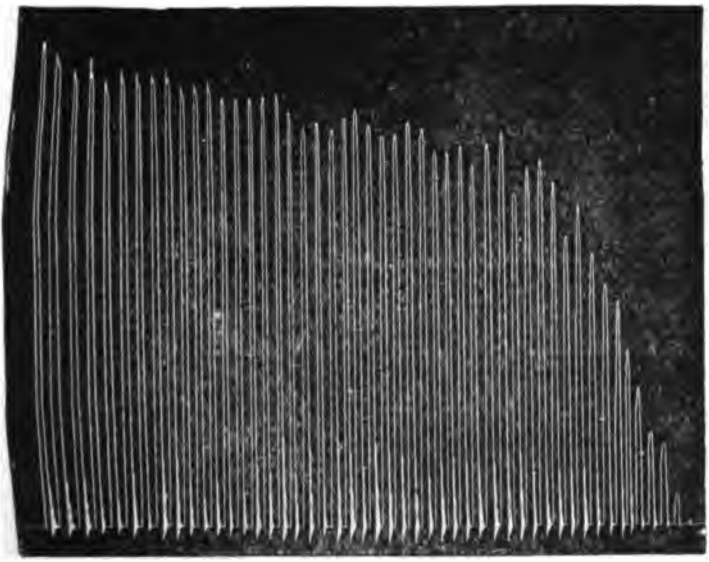
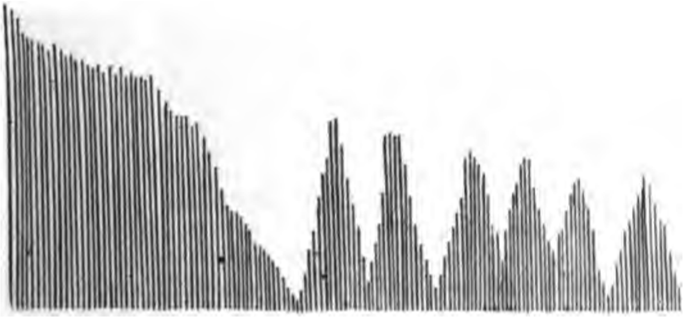


FIG. 3.



* FIG. 4.

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* This tracing is, it will be noticed, on a reduced scale.

indefinitely, the thirtieth period, after which the experiment was stopped, being the same as the fifth. This development of the curve was first discovered by the American psychologist, Dr. Warren Lombard, in 1889, when working in Professor Mosso's laboratory at Turin.

Now it is perfectly evident that the fatigue represented by these curves may still be—in spite of the more or less complete isolation of the muscle which is working—of extremely complex nature. The voluntary stimulus is generated somewhere and somehow in the cortex of the brain; it passes thence through the nerve cells, from which it is propagated along the nerve to the muscle. There are, then, several possible explanations of the muscle's failure to contract: the fault may lie with the nerve cells, which do not send the required stimulus, with the nerves which do not transmit it, or with the muscle which does not obey it. Experiment seems to show that we may, meantime, neglect the nerves, as being mere cords of communication practically insensible to fatigue. The distinction is between central or nervous and peripheral or muscular fatigue. To clear up this uncertainty, Professor Mosso stimulated the muscle directly by electricity, and so obtained a series of contractions without the intervention of the will. He found that the outline of the curves thus obtained closely resembled that of the voluntary curves, and he was thus led to conclude that some of the most intimate personal characteristics of fatigue have their origin, not in the central system, as one might suppose, but in the muscles.

This same experiment was tried also by Dr. Lombard on his periodic curve. He applied a voluntary and an electric stimulus turn about with the result that he obtained a double curve, the one (voluntary) showing the usual periodic form, the other simply sinking to a minimum. From this and some other tests he concluded that the periods originated in the central system somewhere below the mechanism connected with the will, not in the muscles. These results were confirmed by Dr. Maggiora, but a more recent observer, Dr. Z. Treves, of Turin, has, with apparent right, impugned them. Into the details of this I need not go: I merely mention it to show the uncertainty of the ground on which we are now—at least occasionally—treading, owing both to the difficulty of the subject and the recency of the investigations, which prevent sufficient data having been yet accumulated to make sure conclusions possible.

There is another point with regard to the curves that may have occurred to some, namely, that though the muscle is exhausted for the particular weight used, it might still be able to lift a lighter weight; that is, that the exhaustion is not total, but relative. The amount of work represented by any of these curves is not the total amount of work which can be got out of the muscle, but only the amount of work which can be got out of it in the particular circumstances in which it is placed. In 1898, Dr. Treves, of Turin, began an investigation with the object of finding out how a maximum of *work* could be obtained from the muscle. With this object in view he used a decreasing series of weights, and he obtained a curve similar to that shown in Figure 5. He modified the ergograph, so that the work was done by bending the elbow. Beginning with a weight of fifteen kilograms, he lowered it successively to thirteen, eleven, and nine, with the effects indicated in the tracing. You will see that for the first three weights the curve descends more or less rapidly, showing the progressive inability of the muscle to cope with that particular weight, but that when the fourth weight is reached, the curve forms, approximately, a horizontal line, signifying that the work now being done can continue almost indefinitely. This result, striking as it at first appears, is really in accord with our daily experience; we know, for example, that workers in factories can continue to work their muscles rhythmically in satisfying the needs of a machine for long periods of time. We may compare this constant phase with the rhythmic beating of the heart which never ceases except with life. The explanation in both cases is the same: waste and repair are simply balancing one another; the muscle is working, so to speak, from hand to mouth, using up at each contraction the nutritive material brought to it by the blood. If the weight is decreased during this phase of constant work, the muscle is even able to renew its forces to some extent, so that after a partial rest of this kind it is able to work once more for a short period, with a heavier weight than the nine kilograms. With this fact, also, we are practically familiar; in any physical labour, in digging the soil in a garden for instance, when exhausted by the heavy work, we turn to some easier part of the ground, after working at which for some time we are able to take up the heavier task again with fresh vigour. It is, however, important to notice that the increase of work thus obtained is *not* equal to the loss of work suffered when a smaller weight was used. Another point of importance is this: that if the muscle begins to work with the weight of the constant phase—in this instance nine kilograms—we can at any time get the additional work which the muscle can produce with the heavier weights. Thus it seems that the heavier weight acts as a stronger stimulus,

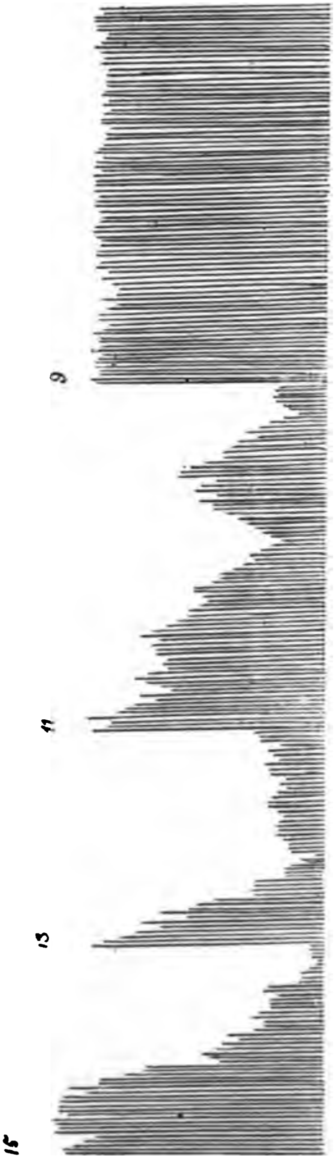

Fig. 5.

compelling the muscle to use reserves of material which are not touched by the weaker stimuli evoked by the lighter weights. It is not impossible that there may be analogous conditions in the brain. When the artist says he is waiting for inspiration, it may be that his brain is waiting for the stronger stimulus which will enable it to use stores of material yet untapped. Many people feel that they can never really work for an examination until it is close upon them. Such brains are capable of a maximum effort only in response to the spur.

It has been seen that the curve of fatigue is a complex one, indicating possibly both central and peripheral fatigue. The question now arises whether it is possible in any way to distinguish these two elements. With this end in view, a very interesting series of experiments was carried out by Mlle. Joteyko, of Brussels. If you exhaust the flexor muscles of the finger in the ergograph, and then immediately after test the power of your grip with the dynamometer, —a steel spring in the form of an ellipse with facilities for marking the amount it is compressed,—you will naturally expect to find, as in effect you do find, that your power is below normal. Now this decrease may equally well be attributed either to central or to muscular fatigue. But if we test the left hand, and find its power affected by the work done by the right hand, then it is natural to attribute this alteration to a central change. The experiments were carried out on twenty students of the University of Brussels, and among them three strongly marked types were discovered. The first type showed *no* sign of fatigue in the voluntary centres after ergographic work, but, on the contrary, a slight excitation, showing itself in an increase of the normal force of the left hand. The second type never showed any such increase of power after ergographic work, but always a decrease, which, indeed, was sometimes as much as 20 per cent., or one-fifth of the normal. The third type distinguished was a mean between these two, and showed an increase of power after writing one curve, but thereafter a decrease. The first type is, of course, the most resistant to fatigue. This experiment is one, it seems to me, which might with advantage be carried out in schools, and might afford valuable indications of the nature of individual children's reaction to fatigue. The depression or excitation of the nervous centres is found to disappear after four or five minutes' rest, whilst ten minutes' rest, at least, is required before the muscles have entirely recovered from the effects of writing a tracing.

A remarkable additional proof of the different effects which physical work has on different individuals was found by testing the sensibility of the skin before and after ergographic work of ten students, belonging in marked degree to either of the contrasting types here distinguished. It was found in every case that if the muscular power of the left hand increased after work being done by the right, then so did the sensibility of the skin; and if, on the other hand, the muscular power decreased in consequence of the work, so also did the cutaneous sensibility. This is a strong confirmation of the hypothesis that the alteration in power is due to alteration in the nervous centres.

A more detailed study of the results given by this experiment confirms in a very striking way a remarkable suggestion made by some earlier investigators (Hoch and Kraepelin). Each curve may be regarded as composed of two factors: first, the total height to which the weight has been lifted, and, second, the number of times that a movement has taken place. Thus in Figure 2 the total height is about 600 millimetres, while the number of liftings is 31. Now it was discovered that these two factors were, to a certain extent, independent of one another—that is, that some causes of variation had a greater effect on the height, while others, more particularly, affected the number: thus, if tracings are taken every ten minutes, the fatigue thus produced shows at once in a diminution of the *height*, while some time passes before there is any diminution in the *number*. Again, if a tracing is written after a meal, an increase is found in the *height*, while the number does not vary or even diminishes a little. These and other variations seemed to indicate that the height depends mainly on the state of the muscles, whilst the number is dependent on the central nervous system. Thus, in the second instance given, the food taken has increased the force of the muscles as is shown by the increase in the height of the contractions, while cerebral energy has not altered or has even diminished a little, owing to the blood being drawn off from the brain, (shown by the fact that the number has remained the same, or has decreased). With the view of testing this suggestion, Mlle. Joteyko examined her results, and found that when a central depression is indicated by the dynamometer, there is a proportional decrease in the number of times the weight is lifted in a second tracing; whereas there is a proportional increase in the number in those cases in which the dynamometer indicates an excitation of the centres. The theory that the height to which the weight is raised mainly depends on the muscles, while the number of times it is lifted mainly depends on the will, is thus strongly confirmed; and there are eight or ten other pieces of evidence adduced in its favour which time forbids me to cite. The theory is not, however, I believe, fully accepted by all investigators, though the evidence certainly seems to show that some connection of the nature indicated does exist.

The relation between fatigue of the central nervous system and muscular fatigue is—to teachers especially—perhaps the most important in the whole investigation: I need therefore make no apology for dwelling on it a little longer. Several most interesting studies—the latest in January of last year—bearing upon this question have recently been published by Dr. Treves, of Turin. An important question which occurs to us at once on looking at the curve, Figure 5, which represents the muscle in its constant phase of work, is this: when in the muscle the processes of waste and repair are thus balancing, is the reservoir of nervous energy in the same case? Are its losses made good as soon as they are created, or is there a drain of nervous energy which, although not felt at the time, will yet, sooner or later, manifest its baneful effects on the organism as a whole? We have, perhaps, as yet scarcely enough data to answer this question in an entirely satisfactory manner. Dr. Treves's own opinion seems to be that this drain of nervous energy does take place; that our physical mechanism is constructed more with the view of obtaining as much work as possible out of it than with the object of sparing any over great expenditure of our energies. Our intelligence and our will, he says, pushing us on to get a maximum of work in a minimum of time, with the aid of our practically inexhaustible muscles, a state of things is established leading to undoubted overpressure of the parts of the nervous system which regulate our energies.

This danger is increased when we have brought our muscles to a high state of efficiency by training, for experimental investigation seems to indicate that training does not have as favourable an effect on the nervous system as on the muscles. Now training does have a very marked effect on the value of the weight which can be lifted in the constant phase of work, its influence on this is very much more marked than on the value of the initial weight; this great increase of work means an increased demand on the nervous system, and if *it* has not been proportionally strengthened by that training which has strengthened the muscle, it follows that this demand may easily pass the physiological limit. It is in this way that

Dr. Treves would account for the very frequent sudden breakdown of athletes and others who have trained their muscles to excess. More experiment is required to throw light on this very important point; Dr. Treves's results have not yet, I believe, been confirmed by other observers.

You will remember that Mlle. Joteyko, in her experiments with the ergograph and the dynamometer, found that the muscular fatigue caused by writing the ergogram, was followed in some cases by an excitation of the nervous centres and, in some cases, by a depression, but that all signs of this depression passed off in four or five minutes, whereas it took ten for the muscle to recover from its fatigue. From this and other experiments she concludes that the muscle is more sensitive to fatigue than the nervous system, thus apparently disagreeing with Treves. But it must be remembered that the ergographic curve is really a curve of effort; when the muscle ceases to be able to lift the particular weight employed it is still capable of a great deal of work with a lighter weight, and it is quite possible that a long period of muscular work may mean an inordinate drain on the nervous system.

The relation of nervous to muscular fatigue will become clearer if we turn aside for a moment to enquire a little more closely into the *cause* of this fatigue, the laws of the manifestation of which we have been investigating. A flood of light was thrown on the cause of fatigue by an interesting experiment which we owe to Professor Mosso. He took some of the blood of a fatigued animal, and injected it into a normal animal, with the result that the latter at once began to exhibit signs of fatigue, thus showing that some harmful substance was present in the injected blood. It is also known that if a muscle removed from the body is made to contract by repeated electric stimuli, it retains its contractility much longer if it is frequently washed by a weak solution of salt and water being passed through the blood vessels. From these experiments it becomes clear that a muscle in functioning produces toxic substances which are normally washed away by the blood, but when this becomes vitiated, or can no longer perform its office quickly enough, then the phenomena of fatigue result.

Now, in ordinary life we are quite familiar with two ways of producing fatigue; we may do it by physical exercise or we may do it by intellectual work. Now what is the relation of these two kinds of fatigue to one another? By aid of the ergograph, Professor Mosso has succeeded in answering this question. He requested several of his colleagues to write tracings before and after several hours of hard intellectual work, namely, the conducting of oral examinations. The result is shown in Figure 6, and will leave no doubt in your mind of the effect of intellectual work on the muscles. The first tracing was written before the examinations, the second after. These tracings are Dr. Maggiora's. In another colleague quite an opposite result was obtained; the effect of the intellectual work was to increase the muscular force, or, at least, to enable the muscles to produce a greater amount of work. This excitation is, however, only temporary; in all cases a marked decrease of muscular power is the final result. Now some authorities maintain that there are diverse stores of energy in the human body, and that we can exhaust one without trenching upon the others; that, for instance, we can tire our muscles by walking, and yet still have at our disposal the provision of energy which the nervous system reserves for the use of the brain. His experiments lead Professor Mosso to an opposite conclusion. He considers the nervous system to be the sole source of energy, and that it can be exhausted by the exaggerated activity of any organ whatever, whether cerebral or muscular. At bottom, all fatigue, according to him, is nervous fatigue.

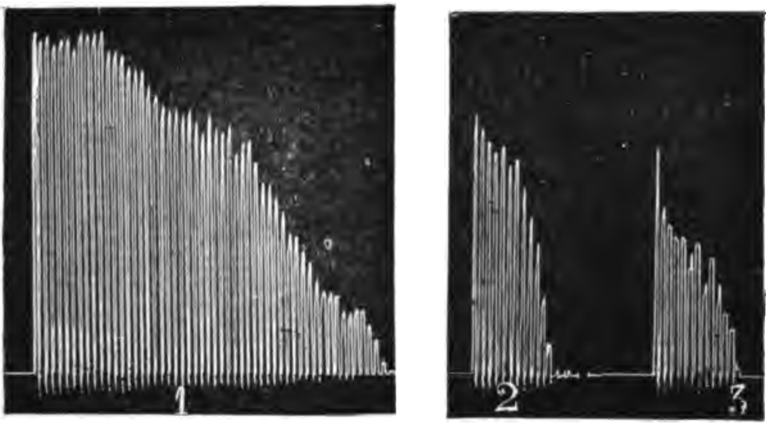

FIG. 6.—Involuntary contractions. The flexor muscles excited by an electric current every two seconds. 1. Written before the examinations. 2. Immediately after the examinations. 3. Two hours after the evaminations.

By other authorities, however, the facts are interpreted differently, and the first seat of fatigue is thought to be the periphery, or, we may say, the muscles. By a modification of the ergograph, it has been possible to prove that the nervous stimulus becomes stronger as the fatigue becomes more pronounced. The weight appears to become heavier, and we make a greater effort to lift it. This fact finds ready confirmation in our own consciousness, which attributes the fatigue, without hesitation, to the muscles, having no doubt that the will could send an even stronger stimulus. Therefore the contention that the fatigue does originate in the muscles will be in this case, by most people, readily granted, but it will be asked : How does the matter stand in the case of intellectual fatigue ? Is it possible that this can be in any way shown to be at the beginning a peripheral phenomenon ? Well, we have seen in Figure 6, in the clearest way, that mental exertion does effect the muscles. Now someone may perhaps object that it may be the will that is here fatigued, and cannot stimulate the muscles sufficiently to make them contract as much as usual. This objection was foreseen by Professor Mosso, and to answer the doubt thus suggested he performed the experiment both before and after the examinations, using the electric current as the stimulus. As a matter of fact, the tracings shown were both obtained in this way. Thus the will does not enter into the question at all, and there is not the slightest doubt possible that the fatigue of which the tracings give evidence belongs to the muscles.

We may perhaps find a parallel to what takes place here if we consider what happens when an animal perishes of hunger. The first consequence of want of food is that we grow thin ; the fat in our organism is consumed to supply vital energy ; thereafter the substance of the muscles and of the internal organs begins to disappear ; some of the internal organs may lose as much as half their weight, while the muscles may be diminished in weight by about one-third. But from this general wasting the heart and the brain are exempt ; to the last they retain their weight. It is thus clear that the other organs of the body are able to give of their substance to preserve these two, on which life itself depends.

Now, in intellectual fatigue it is perfectly possible that something of the same nature may take place. The brain, in working, demands a great supply of chemical energy, and to meet this demand, useful substances may be drawn from the muscles to be consumed in the brain. There would be no difficulty about the means of communication, for every few seconds the blood passes right round the body.

In ordinary consciousness, also, indications are to be found that our muscles are more sensitive to fatigue than our nervous centres. After several consecutive hours of hard brain work it is often of physical rather than of mental fatigue that we are conscious. And it seems to me that the brain is very frequently more able to stand the strain of an extraordinary amount of work and can recover from it more quickly than the muscles. On this question, however, as to whether the nervous system or the muscular is to be regarded as the primary seat of fatigue, the final word has still to be pronounced. Fortunately, the answer is not of very much importance to us as educationists; but what *is* of the utmost importance is that we should recognise that all fatigue is essentially one. In the past, how often has it been the custom to send children wearied with intellectual work to do gymnastics or to play hockey or cricket, on the plea that the exercise will refresh them. The experimental study of fatigue shows in the clearest way that this is simply adding to the discomfort from which they are already suffering.

This warning may be emphasized from another point of view. The ergographic curve has been studied to find out how long a rest is required before a muscle has completely recovered its power after writing a tracing. Now if the total number of contractions which can be executed is thirty, and if only half that number is performed, then it is found that the period of rest necessary may be reduced, not to a half only, as we might expect, but actually to a quarter. Thus the half tracing can be repeated again and again if rests of half an hour are taken between every two curves; while, if the whole curve is written, a rest of two hours is required before a second one similar to the first can be described. This shows that a muscle when fatigued works in conditions productive of much more harm to itself than those in which it works when it is fresh. You will also notice that the work which it does during the first half of the curve is much greater than what it does in the second half. Thus from the point of view of result, of mechanical work done, no less than from consideration for the health of the muscle, it follows that work done in short periods, alternating with short periods of rest, is better than that done in longer periods.

If we accept the conclusion, which, indeed, seems fairly well established, that muscular and mental fatigue do not at bottom essentially differ, we might by analogy draw from this last fact an argument in favour of short periods of intellectual work in schools. On the other hand, we must remember that these results are derived from what are essentially curves of effort, that is, the muscles are placed in conditions particularly unfavourable for the production of work; whereas we have seen in Dr. Treves's curves that when these conditions are favourable, an indefinite amount of work can be produecd; and we may remember, though this is a disputed point, that in the opinion of many physiologists the nervous centres are more resistant to the effects of fatigue than the muscles.

We must also bear in mind that a certain amount of fatigue is health-giving. The aphorism that function makes the organ is one that should never be lost sight of by teachers. The children who suffer from the evil effects of underwork are quite as many, I believe, as those who suffer from the evil effects of overwork, although as the former evil results are not so obvious we hear much less about them. If it were possible to institute in schools a go-as-you-please class, in which able children should have an opportunity of showing what they could do when the regulation of the amount of work was left to themselves, I think many teachers would have results which would astonish them.

It is, of course, admitted that overwork, overstrain in any form, is infinitely more harmful to a child in whom the processes of growth are still going on, than to an adult. Fatigue is essentially a chemical process, and the toxic substances produced in its course must have a more deleterious effect upon an organism which is still immature. I do not, however, think that the intellectual work ordinarily demanded by a well-arranged school is at all likely to entail overwork in the average child. But there is one point with which I should like to have dealt in the course of the paper, and which I must just refer to here as bearing upon this question, that is, the effect of emotion on intellectual fatigue. The immense additional effect produced when emotional strain is coupled with intellectual work has been demonstrated by the ergograph, and I should like to have shown the tracings. The point is, however, one which will, I think, be readily granted me, for everyone knows the evil effect of working against time, for example, or of working with an overpowering sense of the consequences of our success or failure. Now, many children to whom the purely intellectual work of their class would be, in comparison, nothing, are subjected to this strain. A wholly adventitious importance is attached by unwise parents and teachers to examination results, to class place, etc., and the consequence is that the children work in the most unfavourable circumstances, in conditions of effort, conditions which, as we have seen in the ordinary ergographic curve, are most hostile to the muscle, and can scarcely be supposed to be less harmful to the brain. From this source of strain we can scarcely be too earnest in our endeavours to set our children free.

I should now very much like to take up the different methods which have been devised with the express intention of testing intellectual fatigue, methods which have been tried more particularly on children, and on children in large numbers. But I have found myself obliged to narrow my subject somewhat, and to confine myself to what may be called laboratory methods. I have done this the more willingly because it seems to me that it is from the laboratory that we have hitherto obtained the most valuable additions to our knowledge; the mass methods have so far either given us conflicting results or told us little that we did not know before. There is, of course, nothing derogatory to the methods in this. It is, indeed, only what we must expect, if we consider the difficulties with which the investigation is bristling. Indeterminate experiments are not lost if they act as posts of warning or of guidance to subsequent investigators.

In truth, we are only at the gateway of a new and most interesting field of research, which lies stretched before us, with no beaten highway on its vast expanse, but only a few foot tracks marked by hardy pioneers. We do not know the exact cause of fatigue; we do not know precisely how the products of fatigue act on the organism; we do not know how much fatigue is physiological, or where it begins to be harmful; we do not know with certainty which subjects in schools are most productive of fatigue; we have only vague knowledge of the enormous individual differences which undoubtedly exist. In a word, the field is open in every direction; new methods are required, and fresh applications of old methods, criticism of the results already obtained, and indication of the lines which investigation ought to follow.

Many workers are already engaged; school children are being examined *en masse*, the results tabulated, averaged, and reduced to graphic form; while all the time the quiet laboratory student is thinking out new machines, or laboriously working his muscles up and down in the endeavour to find out the most hidden economies of his organism. Much has been done of that hard initial work, which marks the half-way house of the proverb; some fruit has already been gathered, and signs are not wanting that much more is already ripening to harvest.

NOTE.—The originals of the tracings which illustrate this book are to be found in Professor Mosso's little book on "Fatigue" (translation, Sonnenschein, 1904), or in Papers which have appeared at various times in the *Archives Italiennes de Biologie*.

The Personal Influence of the Teacher.

By Professor Findlay.

Extracts from Address to the Manchester Branch of the Teachers' Guild.

It will be of assistance if we introduce our theme by exhibiting it in relation to other topics embraced in the study of education. Following the lead of Herbart, we may divide the task of the teacher into two sections—training and teaching. These are distinguished by the circumstance that in teaching we employ some medium, some branch of instruction or occupation, and thereby seek to achieve the educational aim; in training, on the contrary, our action is direct, immediate; the pupil and his teacher are here brought into personal contact, apart from the resource of any third factor, such as is employed in tuition.

Training, once more, includes two elements; these have very little in common, except the contrast that they both present to teaching. You may train first of all by government, by the exercise of your authority; or by guidance, seeking to lead your pupils along the right road by the stimulus of your example, or by speech with him—in a word, by your personal influence. The relation of these parts of a teacher's work to one another may be illustrated by a scheme as follows (compare Rein: "Outlines of Pedagogics," pages 81, 163, &c.):—

The conduct of Education. (Erziehung.)

Immediate
Training. (Fuhrung.)
Government. (Regierung.)
Guidance. (Zucht.)

Mediate
Teaching.
(Unterricht.)
(Lehren.)

It may be as well to add that this analysis is taken from Herbart. I have chosen my own English terms to render the German originals, but these are not identical with the renderings given in the translations recently made from German Herbartian literature. We sorely need a definite vocabulary of technical terms for the science of education. Many of our discussions would be illumined if we would agree as to the precise meaning of such words as discipline, training, and the like. I discard the word discipline entirely, because it is employed in so many different senses. Training I select as a general term to cover the whole field of action which lies outside the province of teaching. It is not a wholly satisfactory epithet, for it has also been abused by loose and vague usage, but it is fairly well understood in popular speech, and it has an established place in that source of sound English, the Authorised Version.

2.—Let us now confine our attention to one of the two means of training—that which I have indicated by the term guidance. As an alternative, we may select the term personal influence, as I have done in the title of this paper, but I prefer the word guidance, as suggesting definite deliberate activity on the part of the teacher ; influence points rather to the vague impressions produced by the contact of mind with mind, regardless of the guiding motives.

It is precisely this definite purposeful character, attached to the idea of guidance, which gives the best starting point for an exposition of it. Comparing the two divisions of education, teaching and training, you will readily recognise that the former has received much fuller treatment than the latter. We possess, in our educational literature, a varied stock of contributions to the science of teaching, partly dealing with general method, but more often dealing with the separate branches of instruction and occupation. How scanty, on the other hand, is our stock of really useful material on training, on the immediate relationship between teacher and pupil. I say "really useful" material, for it is true that while we have a variety of books which contain reflections on this subject, the majority of them lack that very element for which I am pleading —of definite, pointed analysis, leading up from theory to practice. True, these treatises serve to impress us with the importance of our vocation ; they make us realise what an enormous power, for good or evil, is in the hands of a teacher of the young, but they are too apt to leave us there; they bring us to the foot of a mountain of difficulty, but how to climb its slopes we scarcely know.

And surely the situation is somewhat similar among ourselves in the practice of our profession. We do not deny the importance of what is called "moral education ;" we admit our responsibility along with the other influences which surround the child, for the formation of character, but we do not see our way to any detailed plan of action for the achievement of this aim, similar to our organised scheme of instruction ; we are, therefore, disposed to leave the matter to take its chance ; it depends, we say, very largely on the personality of the teacher —some can exercise a strong influence, others cannot. Each teacher must be left to his own discretion in dealing with so delicate and complex a problem.

I think you will agree with me that there is a real danger of actually lowering the educational ideal. The forces that have moulded public education in this country during recent years have not been an unmixed blessing when we examine them in the light of the final purpose of education. Technical instruction has its place in any scheme of education, but it has no claim to usurp higher and worthier ends. The Jewish boy in ancient days was indeed taught a trade, but he was also taught to walk in the way of righteousness. To-day our English boys and girls are offered knowledge which shall enable them to earn a livelihood. This is right in itself, and may be brought into harmony with the highest ethical conception of the aims of life, but if these pursuits are elevated so as to become the main purpose of the school, our task as teachers may be simplified, but it will lose its saving quality.

For, after all, what are the facts, the observed facts, in relation to our functions as teachers? What, finally, does a serious right-minded parent seek for when he entrusts his child to our care? Each of us, as teachers, will have had a different experience; I, for my part, am bound to say that while many parents appear indifferent with reference to the training of character, they are not really so. Indeed, I attribute the fact that boarding schools and small private schools abound among us in this country very largely to the desire of parents to place their children in institutions and among teachers in whom they have confidence, whom they have reason to believe will exercise an active personal influence over children. If, instead of limiting our view to the last ten years, we considered the course of secondary education during the last half century, we should surely conclude that the practice of English teachers has, on the whole, been to accept a very high standard of responsibility; Arnold and Thring have been the examples which we have followed rather than Bain. Our secondary schools may have failed to give efficient instruction, but the best and most influential forces among us have agreed with the best public opinion in making training even more important than teaching as a part of the teacher's task.

This, indeed, I claim as our special English tradition; in this department of the theory of education we possess experience and knowledge which cannot be found in any other country. Other countries, such as Germany, afford us valuable aid in the study of our science of education, but we have here at home one field in which better work has been done and is being done than we can find in our travels abroad. Why this should be so we need not pause to discuss, but it would be a grave misfortune for our English public education if the pressure of other forces—of the demand for organization, for technical instruction, and the like—should lower the standard of our aim which our best English tradition has set before us.

3.—We shall realise most clearly the nature of guidance by contrasting it with that of government, the other element involved in training. Government—or discipline, as it is often called—is not an end in itself; we do not seek to re-produce order for the sake of order, but because it creates a situation in which the educational process of teaching or guidance can be conducted. The child is a creature of wayward impulses; these must be controlled by government simply because the child is a child. The aim of guidance, on the contrary, has a direct intention on the character; we seek to lead the child to follow our teaching or our example, but we leave it to the child to determine whether it will follow or refuse to follow. In guidance we have no resource outside of ourselves, no compelling force, no punishment or reward, no intermediary interest such as is supplied in teaching by the branches of instruction; but teacher and child are brought face to face for good or evil.

The contrast between government and guidance is not wholly accurate, for, in one aspect, government may be regarded as an "End in itself" since habits of order and obedience are also valuable elements in character; but the distinction, in principle, is sound, for we do not, or should not, create the machinery of government with the view to provide practice in the arts of obedience; the moral benefit accruing therefrom is incidental, and is not the first purpose which we have in view when we exercise our authority.

The two may, again, be usefully compared with respect to their psychological basis. Both, in contrast with teaching, rely largely upon suggestion, for while the ends of teachers are achieved by formal exposition, by reflective processes of thought, much is achieved in training without such reflection. The child "does as he is bid," not because he appreciates the reason, but simply by imitation. But while suggestion plays so large a part, both in government and guidance, the motives that prompt the child to follow are often widely different: he must obey your commands because he is the inferior, and as such will follow you, from emotions of awe or respect, or even fear. But guidance must seek its basis in a different class of emotions. "Perfect love," as St. Paul said, "casteth out fear." Government may be compared to the "old dispensation" of law and commandment. Guidance is conducted under the new dispensation; the teacher's influence here depends upon the personal regard which the pupil entertains for him. Stanley has given us, in his account of school life at Rugby under Arnold, a very clear description of the motives which worked upon the minds of Rugby boys who came under their head-master's influence:—first, motives of respect and even of fear, later on, of sincere personal attachment.

Turning now to another side of the mental life, to volition, the contrast between government and guidance is even more apparent, and is all the more necessary to be borne in mind, because it is in this region that we recognise the final result of training—the good will, formed by right purpose directed towards right action, is the kernel of character. Now government implies subjection; it relies, if necessary, upon force; its *ultima ratio* is penalty; but guidance renounces the rod, it assumes a situation in which compulsion is banished, it seeks its ends by developing freedom of will. The pupil has the choice, to turn to the right hand or to the left. True, there are penalties; suffering, here as everywhere, will follow in the footsteps of unrighteousness, but the teacher, when acting as the child's guide, does not threaten or promise; on the contrary, he recognises the conditions under which the child must grow, if his character is to develop with the strength of freedom. He points the way, but leaves his pupil to determine whether he will walk therein or no.

Once more, in the intellectual side of child nature, the operations of government and guidance afford a contrast. Our rules and commands cannot always be understood by our children; they must acquire habits of obedience long before they approach the age of reason. Government in the school is similar to government everywhere else—"Theirs not to reason why;" if the requirements of law were to be postponed by the law-givers until the subjects appreciated the reasons, the ends of good government would never be attained. True, the child should learn in course of time to understand the nature of government, just as he should understand in due time all the processes that affect his development; but this understanding is secured through teaching; it is not *prima facie* a matter which belongs to the sphere of government. But he who seeks to guide the child has a more extensive aim. He realizes that the child will never achieve strength of character unless he arrives at a self-conscious appreciation of motive and end. Suggestion, as we have seen, plays a great part in the early years of training, and some children, incapable of deep reflection, may require all their lives to be kept in leading strings. But a character trained only on its emotional side has no root in itself, and the ends of guidance can only be achieved by keeping step with the development of the intellectual powers, opening up to the expanding mind an expanding vision of wisdom, acquiring the quality which Arnold so happily described as "moral thoughtfulness." On this topic I may refer you to a little book by Mr. Cotterill, formerly of Fettes College, in which he points out the importance of getting older boys in public schools to understand the reasons and principles underlying the organisation of school games and the like.

4.—What, then, are the means, the occasions through which the teacher will be able to exercise influence upon the child? Here we come face to face with the central difficulty of our theme. How am I, as a teacher, to establish personal relations between myself and my pupils? When, where, how am I to exercise this influence which shall produce such a marked effect upon him? It is in answering these questions that popular writers on moral education seem to miss the mark, and hence they are led to substitute these vague hortatory sentiments to which I have already alluded.

Nor can I pretend to answer these questions in anything like a complete fashion. Our analysis of the means of guidance lacks at present its scientific basis; we know comparatively little of the growth of character, of the laws of development in the sphere of habit and will; indeed, it is only in recent years that we have begun to recognise the important part which scientific observation will hereafter play as an aid both to teacher and parent.

We must, therefore, rely upon experience, and I shall offer one or two conclusions which the experience of the best teachers seems to warrant.

First of all, the subject matter, the ideas relating to conduct, is simple, and does not need formal exposition. The general principles of distinction between right and wrong, truth and falsehood, innocence and guilt, grow up in the child's mind apart from positive instruction. It is in the application of these, in the perpetual conflict of daily action, that the teacher's influence needs to be exerted.

Hence it follows that with us, as with parents and with the clergy, the occasions of moral influence must be sought incidentally in the thousand and one circumstances of intercourse between teacher and child, in circumstances and situations not arranged for the purpose, but arising naturally out of the life.

Here it may be appropriate to add a word of criticism upon the attempts now being made—mainly in France and America, but also here and there in England—to teach virtue by means of moral lessons. We are not now concerned to discuss teaching, so I offer no final opinion as to the value of such lessons in ethics, except to observe that such instruction is no substitute for guidance. There are, undoubtedly, many departments of conduct in which human beings can be aided by formal instruction—for example, in our conduct as citizens; but I assert fearlessly, that neither we nor our children need formal instruction in the general principles of morality. But we and they alike need, what mere instruction can never supply, personal guidance in applying these principles to the incidents of our daily life. In this case we may well repeat the words of the Great Teacher in another connection and say: "The Kingdom of God is within you."

Secondly, while guidance does not need to be conducted, and, indeed, cannot be achieved, in formal lessons, the teacher may so arrange his intercourse with his pupils as to obtain many opportunities for guidance, if he be so minded.

The child's life and the child's interests are not limited by the four walls of the class-room. It is outside of the class-room that the chief opportunities for guidance are to be sought. If the teacher is so conditioned that he can only have intercourse with his pupil during the few hours of the day devoted to teaching, I admit that his personal influence will be reduced to small limits. In the class-room the business of the hour is study, and any ulterior aim, however lofty and noble in itself, would be out of place. The teacher's guidance is limited, therefore, to training his pupil in those habits of thought and action which centre round the occupation of the class-room—honesty in work, industry, and the like. It is in the wider range of interests outside of the class-room that the most important effects of wise guidance are to be observed, Hence we can surely deduce a practical conclusion. If we desire to give full play to the teacher's personal influence our scheme of education must be so organized as to give opportunity for intercourse between teacher and child, apart from the hours of instruction.

Field excursions, games, and a dozen other pursuits, interesting alike to teacher and pupil, are thus found to answer a double purpose. Their direct and immediate object may be play or exercise or natural history, but the teachers know that the secondary object of guidance is also promoted by the situation of natural, unrestrained intercourse which these pursuits afford. I hasten to add that this secondary object is, and should remain, secondary; we have no right to create artificial amusements or occupations between ourselves and our pupils in order thereby to provide occasions for guidance; to do this is to effect a kind of deception, which will inevitably react both upon ourselves and our pupil; the one necessary condition for success in guidance is that both teacher and pupil should spontaneously welcome the occasions of intercourse. This kind of refined deception is, indeed, only too common in the present age amongst those who seek to influence others for good; it is similar in origin to the methods of attraction employed by some zealots who gild the pill of prayer and sermon with a generous dose of fife and drum. If a schoolmaster is so unfortunately constituted as actually to dislike football and cricket, it is scarcely worth his while to pretend a zeal for them in order, through their means, to come in contact with his pupils; far better to leave that field of intercourse to others, and to seek opportunities of intercourse in pursuits which are more congenial, for, even among English schoolboys, other topics of interest besides sport may be discovered.

5.—Hitherto we have confined our attention to the case of the teacher in relation to a single child; all that we have so far observed would apply to private tuition as much as to the life of children in the society of school. It is, indeed, necessary that we should first of all consider the case of the individual child—that is the starting point at which a sound pedagogy must begin; but when we have learned to know the needs and the capabilities of a single child, as a unit, we must proceed to consider him as a part of a greater whole, of the society of school. As practical teachers, we recognize that our influence is not exercised alone on separate individuals, but on the mass; guidance which we may afford to one will exert also an effect on others. When, in an earlier paragraph, I spoke of a special English tradition associated with the work of Arnold and Thring and other public schoolmasters, I had in view this standpoint, from which we are now considering our theme—the responsibility of the teacher for the collective society, for the class or house, or the entire school.

The literature of education presents us here a striking contrast. Herbart in this matter is a disciple of Rousseau and Locke; he does not, indeed, follow Locke in expressing distrust of the influence of school; siill less would he follow Rousseau in isolating the growing child from the environment of his fellows; but his experience had not led him to study this aspect of education, and in Herbartian literature we find little reference to it. Stoy, perhaps, is an exception, and in the writings and lectures of Professor Rein more attention is paid to social influence, probably for the reason that the study of socialism, which is affecting so many fields of inquiry, is also playing its part at last in the science of education.

In England Locke has few followers. With Arnold and Thring, and with hundreds of other schoolmasters who have written nothing, the greatest interest of education is found in the school as a society, with its corporate life and corporate interests. The work of such teachers makes it evident that school life can be so organised as to offer favourable conditions for guidance. And, if we admit the importance of this element in education, we shall regard the efforts made by our English teachers as an important contribution to educational theory and practice.

6.—Let us briefly examine these efforts in the three divisions of the School Society to which I have alluded.

First of all, children are assembled continually in class for the purposes of teaching. Here, as we have already seen in the case of the individual child, the opportunities for guidance are limited, and they are still more limited in large schools where 30 or more children are taught together. We might, indeed, draw the general conclusion that the larger the school the more efficient is the teaching likely to prove, whereas the smaller the school the greater the opportunities for guidance. But, whether large or small, the school may be organised so as to encourage the aim of guidance, and the best secondary schools, both in England and abroad, attach importance to this means of education. I refer here to the "form" system, by which every pupil is allotted to a teacher, who is especially responsible for his progress; not only in studies, but in behaviour and character. This system evidently requires that the form teacher shall take charge of his form for a considerable number of hours per week, and with young children it seems better for him to teach his form almost entirely. With older children the necessity is not so great, and the difficulties are obviously greater, for no teacher can qualify himself to teach all the branches of the curriculum in the higher stages. Hence has arisen the plan which is diametrically opposed to the form system—that which is usually described as the "set" system, a "set" being a class composed of pupils brought together only for the purpose of one single branch of teaching, and placed in charge of a teacher whose responsibility is confined to that branch alone.

It would lead us too far afield to discuss in detail the arguments in defence of these two systems, for they concern, in the first instance, the theory of teaching. It is sufficient for our present purpose to point out that, so far as guidance is concerned, the form system is only efficient when it does actually bring teacher and pupils into intimate relation for a considerable length of time. Unfortunately, in most secondary schools, promotions have to be made in forms at the beginning of each new term, aud hence it often happens, especially in large schools, that a pupil scarcely becomes acquainted with his teacher before they are parted.

It is, no doubt, partly due to the difficulty of perfecting the house system, that the house-tutor system has gained an increasing hold on good secondary schools.

I need not stay to describe the system of boarding houses in our large public schools—their main features are sufficiently familiar. For our present purpose the essential feature is the continuity of the bond of acquaintance between the tutor and his pupils, and of the company of pupils with one another during the whole of their school life. In a few of the oldest public schools this relation is still concerned partly with teaching, and it is of great interest to observe the modifications, due to more than one cause, which have been witnessed in the tutor system of the oldest public schools during the last 30 years. In the newer foundations the relationship is concerned with out-of-school interests, with games and house life.

Assuming, then, our acquaintance with the general principles of which corporate life is cultivated in the great public schools, let us briefly note the extension of the system in two directions: (*a*) the adoption of analogous plans in schools which have no boarding-houses, and in schools of a somewhat lower grade—country schools, proprietary grammar schools, and the like. In such schools the boarders usually reside together under one roof, but for "house" purposes the community is divided up into what are technically termed "houses," each with its own government by tutor, prefects or monitors. (*b*) A few day schools, or rather boarding schools, with a large day element, have adopted a similar organisation for the purposes of guidance, and this seems to me particularly important, because the present trend of education among us is undoubtedly to multiply day schools rather than boarding schools. So far as I know, the present Bishop of Hereford, when at Clifton, was the first headmaster to make the experiment. From Clifton, as I gather, the plan was carried, with modifications, to Bath College, to Bedford Modern School, and elsewhere. The organisation is difficult, unless the conditions are favourable, for many parents fail to see the benefit of the system; but with patience we may bring parents into sympathy with sound education, and the example of a few schools is sufficient to point the way to others.

7.—Finally, we may contemplate the organisation of guidance in the whole school, as a corporate society. Here, again, I need not detain you with an exposition of ideas which are familiar to all who read public school sermons; we have a store of valuable pedagogic literature in the addresses which have been constantly published by headmasters since Arnold set the example in 1830.

But the guidance which finds its centre in the school chapel is not the only form in which we may trace a deliberate effort at organisation. Rather may we not say that the entire system of public school management by prefects or praeposters or monitors (each school has its own nomenclature) has been developed under the idea that the tone of a school society, guided in the first instance by the headmaster and his staff, is an essential element in the production of character in old and young alike.

Ideational Memory.

By William Boyd, M.A., B.Sc.

In all intellectual activity, there may be distinguished an active and a passive phase. On the one hand, in so far as all originality in thought must take as its starting point the result of past work, the thinker must be receptive. Such receptivity, it is true, calls for a certain amount of mental activity. If the ideas of others are to become living ideas for a man, there must be a process of selection determined by his own apperceptive activity, in addition to a careful appropriation which neither adds to, nor takes from, these ideas anything essential. On the other hand, as opposed to this receptive attitude but implying it, there is the critical and constructive work of mind which it is the aim of the educator to encourage. Now, while it is the aim of education to develop the mind so that it may be able to think out the significance of new facts, a large part of the ordinary school training is of necessity occupied with development of the receptive powers of the mind. As a typical case may be instanced any book-work science, such as Chemistry or Electricity, in which the pupil is called on to understand and commit to memory a considerable number of facts correlated by certain more or less definite principles. When these subjects are intelligently taught, the mental processes of the pupil are chiefly those of ideational memory: that is to say, the pupil commits to memory a certain body of facts with the help that comes from understanding them as elements in a system of ideas. In a well-set examination paper it is this ideational memory which is tested. But while such examination may give broad indications of mental development, the results are complicated by other factors. The pupil may not do justice to what he knows, by reason of nervousness; or again, through laziness or lack of interest in the time of preparation, the result may not be a fair index of his mental powers.

In order to trace the growth of ideational memory in a measurable way, the writer conducted a series of experiments with all the pupils of a secondary school. As the main test, the following passage was read over three times, and the pupils asked to reproduce all the points in it in their own words:—

> (1) Before the invention of the mariners' compass sailors rarely ventured out of sight of land; (2) for though they were able to steer their course by the help of the

stars, there was always the chance that they might lose their way when clouds covered the sky and hid the stars from sight. (3) It was for this reason that trade by sea was first carried on in the great inland seas, like the Mediterranean or the Persian Gulf, where ships could always keep the land in sight. (4) In these early times, several thousand years before Christ, the Babylonian sailors who took their ships to India, were often driven out of their course by sudden storms. (5) When this happened, they found their way to land again by an ingenious plan. They always carried a few doves on board; when set free, the doves rose in the air and made straight for the nearest land, and the sailors then knew the direction to take. (6) Some people think that this explains why Noah sent the raven and the dove out of the ark.

Several subsidiary tests were given to isolate special phases of memory. Two that had a close connection with the main test may be mentioned. In the one, a sentence of twenty-nine words was read three times, and the pupils were asked to write it down with verbal exactness. In the second, ten detached words were given to be reproduced in their order.

At first I attempted to classify the results by grouping the papers under three heads—good, medium, and bad. But while this gave general indications, it turned out not to be delicate enough. In the end, the most satisfactory method seemed to be one depending on a mark estimate. To reduce to a minimum the variation due to personal impression, I tried to make my marking as mechanical as possible. As the value of the results depends largely on the method, I may indicate briefly its chief features. In the main test, there seemed to me to be two distinct memory processes. In the first place and most important, the leading ideas had to be grasped and remembered so as to bring out the significance of the whole passage. It seemed to me that, apart from modifications and qualifications, there were six main ideas, falling into two sets of three each. (The six are indicated by the numbers in the passage.) These had to be remembered as individual ideas, and, at the same time, as inter-dependent; to each of them two points were assigned. Then, in the second place, to the three longest (that is, the three in which the central thought is qualified or modified by several phrases of subordinate value), one extra point was given in recognition of the fact that the qualification or modification had been remembered. The total points thus came to 15. On dividing the number of points made by all those at any one age by the number of pupils at that age, the following results were obtained :—

	No. of Pupils.			
Age.	Boys.	Girls.	Boys.	Girls.
12	5	5	6·6	6·9
13	27	24	8·4	8·9
14	22	18	10·3	8.7
15	7	15	11·1	10·4
16	1	7	—	12·1
17	4	9	12	12
18	7	13	11·2	12·5

For the purposes of comparison, the results of the other two tests (which were also marked to give a total of 15) may be set down here :—

	Sentence.		*Detached Words.*	
Age.	Boys.	Girls.	Boys.	Girls.
12	9·6	12·2	—	—
13	9·3	10·2	(11·4)	(13·2)
14	10	10·2	(12·8)	(13·0)[*]
15	12·6	11·0	12	12
16	—	13·4	—	12·1
17	13·0	12·7	11.3	12·8
18	12·8	13·2	10·3	12·4

Considering first the pupils under 16, we note that at 12 and 13 the girls are superior to the boys, a fact which will not surprise any teacher who has given an "intelligence" lesson to a mixed class at these ages. The result may be connected with the fact that at 12 and 13 girls begin to show both physical and mental signs of the approach of puberty, two years ahead of the boys. On the other hand, the figures make it clear that the superiority is only temporary: at 14 and 15, the years in a boy's life which correspond generally to 12 and 13 in girls, boys seem, on the whole, to have better memories than girls. In the memory of detached words there is little difference: what there is, is in favour of the girls. In remembering a sentence the boy does not shew himself better till 15. But in ideational memory there is a distinct superiority in the boys of both ages. It is worth adding that even when the average of the boys is higher than that of the girls, the girls with the best memories are better than the best boys; but fewer girls than boys show good memories.

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[*] In the Detached Words Test, a large number of boys and girls failed completely to produce the 10 words. The numbers in brackets give the results obtained by excluding all the failures. Above 14 all the lists were taken into account. The number of successes at the three lowest ages point to the same superiority of girls over boys as is suggested by the results. Among those at 12, there were no successes; at 13, 25 per cent. of the boys and 39 per cent. of girls; at 14, 41 per cent. of the boys and 66 per cent. of the girls succeeded.

Our general knowledge of the intellectual progress made in adolescence leads to the expectation that the pupils over 15 will be much better than those of younger years; and, in a general way, the results fulfil expectations, especially so far as the girls are concerned. An examination of the papers done by the pupils suggests one or two reasons for the advance made by the older pupils. In the first place, there comes in the progress of the years a distinct improvement in verbal memory. It was rare, indeed, to find among the younger pupils an exact reproduction of the words and phrases read to them. Even when there was complete success in rendering the main ideas, it was almost always in the writer's own words. It was only among the older pupils that any close approximation to the original phraseology appeared. Of the thirteen girls who shewed a special degree of verbal accuracy, three were 15 and six over 15. With this may be connected the fact that in the Detached Word Test, many of the 12-14 year-old pupils were unable to remember words apart from their context in a sentence. The older pupils not only had a better memory for ideas in the abstract form of detached words, but showed a greater mastery over the words and phrases of the passage read to them. In the second place, the improved power of memory is dependent on the general intellectual development, of which the ability to think abstractly that is implied in remembering detached words and phrases is only an example. The character of this advance in intellect was well shewn on analysis of the results, by taking sentence 3 as an index. In this sentence there is a double difficulty: not only is the idea of "trade" an abstract one to which it is not easy to give concrete pictorial form, but the relation of the sentence to those that precede it as a conclusion of a series of ideas, demands for the remembering of it some sense of logical sequence. The difficulty found in remembering this sentence may thus be taken as affording some measure of intellectual growth. It was found that it had been omitted entirely, or in great part, by quite a considerable number. Expressing the *omissions* in per centage of these at any one age the result was significant.

PERCENTAGE OF OMISSIONS OF SENTENCE 3.

Age.	Boys.	Girls.
12	40	40
13	41	33
14	23	33
15	0	20

In the papers of the pupils over 15, the sentence was present in every case, though one or two of the boys reproduced it imperfectly. The figures bring out much the same result, as is exemplified in composition exercises. The younger pupils tend to express themselves in a series of loosely-joined simple sentences: with the advance in years comes the ability to use the subordinate clauses that indicate exactly the connections in thought. In short, the defect in memory shewn by the table given above is really a defect in the power to think. The younger pupils do not remember a sequence of ideas based on a process of ratiocination, because, in the first instance, they cannot *think* such a series.

Coming now to the pupils over 15, we notice two points: (1) The boys are little better than those at 15, and are inferior to the girls; (2) The girls show distinct improvement on the younger girls, but make little advance after 16. If the result in the case of the boys is not a misleading one, which a greater number of cases would correct, it may, perhaps, find explanation in the excessive activity of boys' minds at this age. The mental habits of girls are more of a passive than an active order; and while girls take kindly to an assimilative activity, such as is called for in this exercise, the boys shew an impatience of mere reproduction, which betrays itself in an imperfect memory of details, and in the introduction of ideas foreign to the passage. As an illustration of the latter tendency, it may be mentioned that fully half of the boys over 15 add pictorial detail to sentence 5. ("The doves," says one, "rose high in the air, *wheeled round*, then flew off straight for the nearest land.") The result in the case of the girls is suggestive. It is evident that memory is better in adolescence than at any earlier period. At the same time, there is little or no advance after 16. From this, the important conclusion seems warranted that any further growth of mind after 16 must be along the lines of a greater originality, by the pupil being stimulated to activities more personal and more creative than is implied in the assimilative work of memory. Intelligent memorising has a large part to play in education: but, even for the cultivation of memory, there must be a growth of the whole intellect. From the early years of adolescence there should be increasing opportunities for the activities of mind, and, most of all, in the later years when memory has reached the highest point in its development.

Adolescence.

BY PROFESSOR PATRICK GEDDES.

[This article is abridged from the *St. George Review*, by permission of the Author.]

There are two bulky volumes,[*] newly arrived from over-sea, which may anticipate an unusually varied reception from their reviewers. Is this a scientific work addressed to specialists? but, if so, to what particular class, psychologists or physiologists, pedagogues or doctors? Is it not at the same time a popular work for parents and general readers? If it is to be taken as scientific, its deficient orderliness is apparent, its diffuseness and repetition also; while, if it is intended to be popular, there is hardly a section of which, if not the treatment, at any rate much of the terminology, does not present more or less difficulty even to the professional reader. There is too much of the author's note-books, too much also of an imperfectly edited encyclopædia—too much reprinting instead of re-writing of the author's scientific papers and abstracts, of his college advanced teaching and his popular lectures, his critiques and controversies; in fact, they too frequently remind us of the paper bags of Teufelsdroeckh. It will be a wonder, then, if, to many, these obvious, superficial defects of the book do not more or less obscure its merits, which are also manifold, indeed, overpoweringly great in wealth of observation, in breadth of intelligence, in depth of significance; and yet, more is the pity if they delay recognition of its vast and urgent applications to practical life and to educational practice, and these on well-nigh all their levels. For here—much though it is to say this—is one of the most considerable books which have appeared in our time; and that, in many ways, concrete and abstract, speculative and practical. It is one of those strange books which at once exasperate and fascinate the world, which are for all kinds of readers, yet which can be completely satisfactory to no one conventional class. Yet despite all the liberal abuse it has fairly incurred for its defects of arrangement and of style, it must be admitted that their unfavourable first impression wears off; leaving a work profound and original in its thought, always forcible and often convincing in its argument, pregnant in its counsels, iridescent, even luminous, with bright suggestion, and aglow with noble passion.

There are many inducements for us to enter appreciatively upon the detailed study of these volumes. But, alas, the poor

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[*] *Adolescence: Its Psychology; and its Relation to Physiology, Anthropology, Sex Crime, Religion, and Education.* By G. STANLEY HALL, Ph.D., LL.D., President of Clark University, and Professor of Psychology and Pedagogy. 2 vols. 8vo. London, Sydney Appleton; New York, D. Appleton. 1904. 31s. 6d.

British public, who cannot even endure American spelling! what will they say to the strange idioms, the ponderous terminology of one who uses without apology or explanation every term he happens to have remembered from his vast and varied reading through all sciences, and who also freely concocts new terms of his own? Taking one of such passages almost at random, we may, indeed, understand "the aimless palpitation of the sick," but what, oh, what are "pselaphesis," "carphology," and "floccilation"? After hunting up our Latin dictionary, we make out what is meant by "the molimena of nature"; without it we can see that "simiferal" (but why not semi-feral?) is "half-wild." That "therotropic" says much the same thing is plain enough, but a lexikon is wanted for "athetoid," for "dysthymia" (they are not in the index, which even forgets "Johns Hopkins"), and so on. We might compile a whole anthology of dark sayings. "The adult who seeks self-knowledge by introversion is banausic" sounds uncanny enough; but the context will indicate what it means: but as for the "mikro-kinetic gleanings of fibrillary formications" one can only fall back upon another eminent American writer, and ask,

> "Are things what they seem?
> Or is visions about?"

Does this all seem very ill-natured? The author invites it upon himself by telling us in his preface that he has "eliminated much that was technical and detailed, and tried to bring the subject matter of each chapter within the reach of any intelligent reader." Even if we must admit the deficient intelligence, will he not in mercy try again?

Through all this we have to get down to the actual substance of the book, henceforth to be taken at its best; and this may be begun almost anywhere, in either volume, over which at first the reader had best roam and turn at will, reading whatever interests him, and thus quickly catching something of the writer's individual points of view. In the preface, itself a characteristic summary, an order of reading is suggested, but each reader may best find his own. We start, however, with Chapter I.; here the writer begins his biology of Adolescence with Sex, with Growth, with Development. At once he seizes the standard biological conception that the individual in a general way repeats the history of his species.

> "Early stages of growth are telescoped into each other almost indistinguishably, so that phylogenetically the embryo lives a thousand years in a day, and the higher the species the more rapidly relatively is the transit through the lower stages. . . . . , Heredity, which slowly appears as a substitute for the external causes that have produced a given series of characters, tends to produce that succession with increasing economy and speed, and also to become in a way more independent of the causes which originally determined it."

So far ideas with which Haeckel, Spencer and others have long familiarised us; and next follows a summary of the leading measurements of human growth by workers in many countries. Following upon these well-established laws, these observed facts, come the author's own generalisations and interpretations of growth, to discuss which would alone exceed the limits of this review. Suffice it here to note a single striking speculation—that the apparent irregularities of growth and of development, especially at the period of 6 or 7, at 13 or 14, and again at 18, represent great uplifts in the progress of man, while the more stable and healthy periods between may represent more equable and long-enduring phases of his past evolution. The idea ot the boy as father of the man is of course a very old one, but here it is worked out with a new grasp and new detail. The idiosyncracies of the pre-adolescent boy from 8 to 12 are thus largely justified; Rousseau's *Emile* is thus interpreted anew, and child-life in the best nature environment, where attainable, is set far above even the best existing schools.

To pass on to the more specific changes which mark adolescence :—

> "Powers and faculties, essentially non-existent before, are now born; and of all the older impulses and instincts some are reinforced and greatly developed, while others are subordinated, so that new relations are established and the ego finds a new centre. In connection with the reproductive function, love is born with all its attendant passions—jealousy, rivalry, and all the manifold phenomena of human courtship. All the previous religious sentiments are regenerated and some now arise for the first time, motivating a wide plexus of new psychic relations between the individnal and the race, and irradiating to the cosmos. Nature is felt, and plays upon the soul with all its rich orchestra of influences. Art at this time may become an enthusiam and is now first and deeply felt, even though it had been known and practised before. The ethical life is immensely broadened and deepened, because now a far deeper possibility and sense ot sin and impurity arises. The floodgates of heredity are thrown open again somewhat as in infancy. As in the prenatal and infant stage man hears from his remoter forebears back perhaps to primitive organisms, now the later and higher ancestry takes up the burden of the song of life, and the voices of our extinct and perhaps forgotten, and our later and more human ancestry, are heard in the soul.
>
> "In some respects, early adolescence is thus the infancy of man's higher nature, when he receives from the great all-mother his last capital of energy and evolutionary momentum. Thus the child is father of the man, far older and conditioning his nature. He is at the same time reduced back to a state of nature, so far as some of the highest faculties are concerned, again helpless, in need not only of guidance but of shelter and protection. His knowledge of self is less adequate, and he must slowly work out his salvation. Character, temperament, emotions, and appetites are changed; the youth moves about in both an inner and an outer world unrealised. The parent and teacher must understand that Mother Nature has again taken her

> child upon her knee and must stand off a little to see and make room for her more perfect education. These years again, like infancy, should be sacred to heredity, and we should have a good warrant indeed before we venture to interfere with its processes. Before this, boys and girls have been interested largely in those of their own age and have had litte interest in their future or in the life of adults. Their own life is too varied, intense, and absorbing. But the soul now realises in a deeper sense the meaning of maturity and is protensive towards its higher plateau. Slowly the colour and life fade from juvenile interests, which are deciduous like foliage or like milk teeth. Vocations beckon first faintly, and then more and more imperatively. Hero worship arises; youth aspires to excel, first perhaps by the order of nature in athletic contests, then in those of the mind . . . ."

Passing now to the detailed study of the adolescent, his instability and his fluctuation of emotional development are sympathetically analysed. That from energy to indolence, over-activity to sluggishness and inertness, is interpreted as like "neural echoes of ancient hunts and feasts, fasts and famines, migration and stagnation." The oscillations of pleasure, the development of self-assertion, the contrast of selfishness and altruism, and of good and bad conduct generally are now broadly sketched, and sometimes worked out in copious chapters. The dawn of sex feeling and of social instincts, the contrast of conservative and radical instincts, the strife of wisdom and folly, of knowing and doing, all are boldly outlined. For the perplexed parent and teacher the comforting interpretation and due counsel is given, that

> "The human plant circumnutates in a wider and wider circle; and the endeavour should be to prevent it from prematurely finding a support, to prolong the period of variation to which this stage of life is sacred, and to prevent natural selection from confirming too soon the slight advantage which any quality may temporarily have in this struggle for existence among many faculties and tendencies within us. The educational idea is now to develop capacities in as many directions as possible, to indulge caprice and velleity a little, to delay consistency for a time, and let the diverse prepotencities struggle with each other. . . . . Mental unity comes later. Consistency then has its place. The supreme Aristotelian virtue of temperance and the golden mean . . . . slowly knits up the soul, co-ordinates its many elements, represses illusions, and issues in settled character."

Thus we approach the highest critical and practical idea of our author, his interpretation of Genius, one again doubtless not wholly new, but now developed towards fuller possibilities and applications:—

> "Indeed, the best definition of genius is intensified and prolonged adolescence, to which excessive or premature systematisation is fatal. Even in the commonplace lives, higher qualities, and often the very highest, appear in the teens for a brief flitting moment, or, at least, they barely hint their existence and then fade, sometimes because the demands of adulthood are too early or too insistently enforced."

All recognise, though too few vitally remember, how adolescence is the awakening time of Sex; and this is interpreted throughout its range from plant and animal beginnings up to all the possibilities of good and evil, to poetry or madness, to saintliness or sin. To work this out in all its aspects and manifestations, normal and abnormal, is now shown as the problem of the educationist; who must no longer abandon this to the confused specialisms of medicine and insanity, of church or law, but henceforth claim to guide, transform, nay, to absorb and to unify them all.

The adolescent initiations, so common through the savage life in all lands, are here broadly and boldly compared with classic ideas and customs on the one hand, with church confirmation on the other. Thence we naturally pass to a new and vast discussion of the psychology of conversion ; through which the whole field of religious psychology, even the interpretation of Christianity itself, is boldly entered upon. Here, then, is one main culmination of this notable book ; its claim that we may now re-interpret and, therefore, hope to normalise the " varieties of religious experience," and thus increasingly normalise the best elements of the religious life. So that out of biology, hitherto the anti-theological science above all others, or, at least, what has seemed so to Comte and Spencer, to Huxley and Hegel, as to their theological antagonists, we have a reconciliation of this great controversy at once elemental and profound. Between the limitations of an old unpsychological evolutionism on the one hand, and those of religious dogma on the other, our writer clears the way and so makes plain one of the great steps of our time in that progress which the best spirits on both sides have felt even oftener than they have expressed, that the psychologic evolutionist is becoming in a real sense a theologian, as the theologian on his side becomes an evolutionary psychologist.

Returning to our adolescents and their essential transformation, not merely of growth, but essentially of sex, the inner needs of girls and boys are explored, and their qualities and defects analysed, generalised in detail, and generalised anew, just as with our initial chapter of growth measurements. Thus prepared, we are more ready to read chapters of physical and moral pathology, to deal with our author's summaries of adolescence in literature and in biography, still, too, undigested though these are. And now, at this stage, if not before, we may usefully take up the admirable early chapter on Motor Function.

Starting from the physiology of muscle, a subject which has long seemed too material for the common study or classroom pedagogy, we soon get from the simple muscular activities of playground or gymnasium to the study and the class-room again, but now upon a higher spiral. Again a characteristic paragraph may be quoted :

> "The muscles are by weight about forty-three per cent. of the average adult male human body. They expend a large fraction of all the kinetic energy of the adult body, which a recent estimate places as high as one-fifth. The cortical centres for the voluntary muscles extend over most of the lateral physic zones of the brain, so that their culture is brain-building. In a sense they are organs of digestion, for which function they play a very important rôle. Muscles are in a most intimate and peculiar sense the organs of the will. They have built all the roads, cities, and machines in the world, written all the books, spoken all the words, and, in fact, done everything that man has accomplished with matter. If they are undeveloped, or grow relaxed and flabby, the dreadful chasm between good intentions and their execution is liable to appear and widen. Character might in a sense be defined as a plexus of motor habits. To call conduct three-fourths of life, with Matthew Arnold; to describe man as one-third intellect and two-thirds will, with Schopenhauer; to urge that man is what he does or that he is the sum of his movements, with F. W. Robertson; that character is simply muscle habits, with Maudsley; that the age of art is now slowly superseding the age of science, and that the artist will drive out the professor, with the anonymous author of *Rembrandt als Erviebar;* that history is consciously willed movements, with Bluntschli; or that we could form no conception of force or energy in the world but for our own muscular effort; to hold that most thought involves change of muscular-tension as more or less integral to it—all this shows how we have modified the antique Ciceronian conception *vivere est cogitari*, to *vivere est velle*, and gives us a new sense of the importance of muscular development and regimen."

The development of this conception in its physiological detail on one side, its application on the other, is now carried out into what is again practically almost a volume by itself, in fact, quite one of the best in this encyclopædic book. In studying the normal growth and adolescent change of muscle structure and functions our writer insists largely on the broad classification of fundamental muscle and accessory ones :

> "To understand the momentous changes of motor functions that characterise adolescence we must consider other than the measurable aspects of the subject. Perhaps the best scale on which to measure all normal growth of muscle structure and functions is found in the progress from fundamental to accessory. The former designates the muscles and movements of the trunk and large joints, neck, back, hips, shoulders, knees, and elbows, sometimes called central, and which, in general, man has in common with the higher and larger animals. Their activities are few, mostly simultaneous, alternating and rhythmic, as of the legs in walking, and predominate in hard-working men and women with little culture or intelligence, and often in idiots. The latter or accessory organs are those of the hand, tongue, face, and articulatory organs, and these may be connected into a long and greatly diversified series, as those used in writing, talking, piano-playing. They are represented by smaller and more numerous muscles, whose functions develop later in life and represent a higher standpoint of evolution. Those smaller muscles for finer movements come into function later, and are chiefly associated with psychic activity, which plays upon them by incessantly changing their tensions, if not causing actual movement.

> It is these that are so liable to disorder in the many automatisms and choreic tics we see in school children, especially if excited or fatigued. General paralysis usually begins in the higher levels by breaking these down, so that the first symptom of its insidious and never interrupted progress is inability to execute the more exact and delicate movements of tongue, or hand, or both. . . .
>
> ". . . In a sense, a child or man is the sum total of his movements or tendencies to move; and nature and instinct chiefly determine the basal, and education the accessory, parts of our activities."
>
> " The entire accessory system is thus of vital importance for the development of all of the arts of expression. These smaller muscles might almost be called organs of thought. Their tension is modified with the faintest change of soul, such as is seen in accent, inflection, facial expressions, handwriting, and many forms of so-called mind-reading, which, in fact, is always muscle-reading. The day-labourer of low intelligence, with a practical vocabulary of not over five hundred words, who can hardly move each of his fingers without moving others or all of them, who cannot move his brows or corrugate his forehead at will, and whose inflection is very monotonous, illustrates a condition of arrest or atrophy of this later, finer, accessory system of muscles. On the other hand, the child, precocious in any or all of these later respects, is very liable to be undeveloped in the larger and more fundamental parts and functions. The full unfoldment of each is, in fact, an inexorable condition precedent for the normal development to full and abiding maturity of the higher and more refined muscularity, just as conversely the awkwardness and clumsiness of adolescence mark a temporary loss of balance in the opposite direction."

Starting again from the trifling and apparently meaningless movements of infancy, the petty fidgetings of school life, we are surprised to find these suddenly elevated into "one of the richest of all the paleopsychic fields"—at once vestiges of future individual, nay, it may be racial, development, either for evil or good. In the childish restlessness, with its tappings and scratchings its fumbling, touching, twirling and chewing, which so exasperate the conventional parent or pedagogue, Stanley Hall sees survivals of acts which in some pre-human stage may have been of all-importance to life.

> " In their sign-language, which now seems jargon, genetic psychology will one day read its title clear to pedigrees that are lost . . . . they are the partly lapsed and unreclaimed, partly virgin and never-cultivated bad-lands of the state of Man-soul, and may become a source of danger, but they always suggest higher possibilities of human nature when we know and analyse them aright . . . A considerable degree of restlessness is a good sign in young children. Many of what are now called nerve signs and even choreic symptoms, the fidgetiness in school on cloudy days and often after a vacation, the motor superfluities of awkwardness, embarrassment, extreme effort, excitement, fatigue, sleepiness, etc., are simply the forms in which we receive the full momentum of heredity, and mark a natural richness of the raw material of intellect, feeling, and especially of will. Hence they must be abundant. All parts should act in all possible ways at first and untrammelled by the activity of all other parts and functions. Some of these activities are more essential for growth in size than are the later and more conscious movements. Here, as everywhere, the rule holds that powers themselves must be unfolded before the ability to check or even to use them can develop."

The simple quotation brings out in the sharpest way the contrast between the miseducator of the past, imposing a false and deadening, if not disease-making, mechanical order, and this new and true educator of growth. Could any passage more obviously justify the claims with which we introduced the book to the serious attention not only to specialists of all kinds, but to the simplest parent, even the infant-teacher.

Since we learn from living, since knowing comes from doing, we see a fuller development of the practical study of science than even the laboratory and workshop enthusiasts have hitherto dared to dream. None save comparative or utter strangers to almost all the vital ideas of this book—such as too commonly our conventional educational authorities at all levels, from old-world professors, dons, and headmasters, Council-school chairmen and members, or our, till lately, still more old-fashioned bureaucrats and inspectors—can fail to comprehend that the Paper Age of mere book-learning has virtually ended, and that a new world of education, of life and health, of growth and action—nay, of evolutionist culture of genius, of redemption of evil, has fully begun.

In this vast and ever-expanding curriculum of adolescence we find Science set within a more moderate place than some of its specialists may at first sight expect. Yet in the chapter entitled of "Adolescent Feelings towards Nature," we have a discussion which, though initiative and suggestive, rather than dogmatic and conclusive, is again in itself a most exceptional, notable and vital book. The pedantic elementary text-books for petty examinations which at present poison well-nigh every school and college, are pitilessly exposed as "pseudo-science prematurely formalised," and the living beginning of all specialised studies is found in the simple yet ever-deepening love of nature.

Nor are practical pedagogic proposals wanting for each stage of development.

> "In general," he tells us, "the child's reactions to nature are either directly sensory or crudely practical for work and play. . . . . of the first sentimental response the first expressed is a myth, poetry or the religions of nature, for which literary anthologies for reading courses should be gathered. Next in the genetic order comes popular science, with every contact which science can suggest, with the daily paper at home or school, since a science built without this is a hollow corpse. . . . The heroes and history books of each branch of science add another needed element to this still largely humanistic stage. Then, and not earlier, comes the need of utilities and applications; for, contrary to common educational theory and practice the practical side of science should precede its purer forms. While, last and highest, comes pure science free from alloy or myth, the genetic stage, cultivated for its own sake with no motive but love and truth."

In many ways this book will be found to justify its character as an almost encyclopædic survey of human development. Its qualities and its defects alike will also best be understood and appreciated or pardoned as we divine how fully the writer must have lived, not only amid but through much of the experience he describes—giving fuller proof than perhaps he knows of the truth of his own general doctrine of the association of the powers and the difficulties of adolescence.

Parallelism of thought and of insight as well as of doctrine, similarities of defect or limitations also, with other adolescents of genius, often suggest themselves as we read; sometimes, for instance, with Walt Whitman, notably with Ruskin, not to mention others. In fact, the last point of interest of these volumes, and perhaps as science advances, one of the most enduring ones, may be their interest to the critic of life and literature, as a noteworthy and widely typical human document, the revelation of an original and many-sided personality in perpetual flux and growth, aspiration and endeavour, their very deficiencies in logical order leaving the genetic order more plain.

Is any final word of more definite recommendation needed to outweigh the superficial carpings with which we set out? To say that "this is a book which no educationist's library should be without," is as true as the phrase is hackneyed —yet we may say more. Since the *Origin of Species* itself, and its companion volumes, few writers in our language can claim to have thrown more or fresher light upon the origin of our own species in particular, and few indeed have revealed such noble, yet such near and realisable possibilities, of continuing, indeed accelerating, the ascent of man. From previous thinkers we have had the science, the philosophy, and even the idealism of evolution; here we have a new step towards the art of advancing it.

British Child-Study Association.

CONFERENCE, 1905.

It is proposed to hold the next Annual Conference at Derby, on May 11th (evening), 12th and 13th (morning).

The President of the B.C.S.A. for this year is Professor Muirhead, M.A., LL.D., of Birmingham University.

The Local President and Hon. Secretary of the Derby Branch are respectively Miss Tuke, B.A., The High School, Derby; and Miss D. Dyer, 17, Hartington Street, Derby.

The Programme, as at present planned, is as follows:—

May 11th (Evening)—Reception by the Local Presidents and Committee—Presidential Address by Prof. Muirhead, Subject: "The Sphere and Scope of Child-Study."

May 12th (Morning)—Council Meeting, and, if desired, organised expeditions to places of interest in Derby.

,, (Afternoon)—General Business Meeting—Suggestions as to Extended Work—Reports from Branch Delegates—Tea and Conversazione,

,, (Evening)—Lecture by Prof. Earl Barnes, A.B., M.S, U.S. America, Subject: "In What Ways can Child-Study give Help and Guidance to Parents?"

May 13th (Morning)—Lecture by H. Holman, Esq., M.A., H.M.I., Bury, Subject: "In What Ways can Child-Study give Help and Guidance to Teachers?"

All Members of the B.C.S.A. who desire Tickets of Admission to the Conference, or Hospitality, should apply, before May 1st (at latest), to the Hon. Local Secretary, Miss Dyer.

Non-Members who are interested in Child-Study are invited to apply for Free Tickets, which will admit to all meetings except the Council Meeting. It is hoped that arrangements may be made for reduced railway fares to the holders of Conference Tickets.

Laboratory.

Dr. Karl Lamprecht, Professor at Leipzig University, and Director of the Royal Seminary for Historical Research, Leipzig, Germany, has issued a circular especially addressed to all teachers, asking for help in collecting children's spontaneous drawings. The circular is as follows:—

"Dear Sir or Madam,

"Comparative studies have proved beyond a doubt that the development of the single individual, both mentally and physically, is in its main points analogous to the development of the race. It would follow, therefore, that in order to study the development of the race it will be necessary to study the development of the single individual and *vice versa*. In particular, the student would have to consider the mental development and the mental states of our own children, which in many points meet with parallels in that part of the history of civilization treating of pre-historic man. Furthermore, the student will find many parallels in studying those peoples who at the present day still live in the earlier stages of civilization, the study of which is the object of the ethnologist. Child-Study (Paidology) is therefore able to help materially in making comparative studies in the history of civilization of the various races of man, and therefore is necessary in collecting the material for a 'General History of Mankind.'

It is with this object in view that I am going in for Child-Study (Paidology). I have made ample provisions to collect, study, and preserve great quantities of material, that will make it possible to study the mental development of children. Probably nobody could better help me in collecting the material necessary than those who have been specially trained to educate, *i.e.*, teachers, and it is therefore chiefly to all teachers, schoolmasters, schoolmistresses, tutors, and governesses, that I address these lines, hoping they will assist me and collect all they can. I believe teachers will be all the more ready to help me, since my object, to gain a clear insight into the mental development of the child, is one that should interest all scholastic men and women. Moreover, the results of the investigations are bound to be of inestimable value to education.

" I intend beginning my series of enquiries by such topics that may be gone into with the least amount of difficulty; therefore I am at present collecting children's spontaneous drawings from all parts of the world, whether the children be black, white, or brown, so as to make a huge comparative study on children's development in this direction.

" I hope you will be able to help me collecting, and I assure you that you will find it most useful for your own purposes to study the drawings of your children and pupils. And trusting you will respond to my appeal, I take leave to give you all necessary indications as to what drawings should be collected, and in which manner this could best be done. The following points call for special attention if the drawings are to have a scientific value :—

1. Wherever possible, each drawing should be on a separate piece of paper.
2. *Each paper should have the name, age, and sex of the child marked in the left-hand top corner.* If possible, the position or trade of its father, and a general remark on the child's mental abilities.
3. Let children draw with whatever they like, pencil, crayons, water-colours, ink, or anything else.

4. Send in all the pictures drawn, good, bad, and indifferent. The worst are often the most instructive, and this is in no sense a test of the children's ability to draw as seen from the artist's point of view.
5. Careful notes should be made on the back of drawings in every case where the drawing does not explain itself.
6. Every parcel of drawings should be accompanied by a note saying whether the drawings were from memory or whether there was a model. Also by what system the children are taught drawing, and whether they are accustomed to draw during object lessons or not.

" I expect it will take several years to collect sufficient material for a study on so large a scale as I am starting. Although I solicit your drawings as soon as possible, I shall be glad to receive them at any time. Appended are suggestions for four groups of drawings, and I shall be glad to have papers from you on any one or more group that interests you most. I shall, of course, be pleased to refund postage and other incidental expenses. The names of children and collectors will be treated confidentially, and will not be published, unless you specially authorize me to do so. Biological Series (see Group 3) will be returned after copying them, if desired.

" The results and papers on this extensive study will be sent to all contributors as they appear.

" Kindly address all parcels and letters to me at
Schiller Strasse 7, LEIPZIG, Germany.

" Hoping you will join this scheme, and thanking you in advance for any trouble you may take on my behalf,

Believe me,
Yours faithfully,
KARL LAMPRECHT, Ph.D.,
Professor at Leipzig University.
Director of the Royal Seminary for Historical Research, Leipzig.

I. SPONTANEOUS DRAWINGS PROPER.

" Collect spontaneous drawings of children of every age, whether they be a baby's first scrawl or a really fine drawing. The more information you can give about the little artist, and what he intended to draw, the better.

II. SPECIAL DRAWINGS.

" 1. *Single Objects.*

" Have your children draw on separate papers the following :—

Dog, Cat, Horse, Bird, Fish,
Tree, Flower,
Man, Woman, Boy, Girl, Doll,
House, Table, Garden, Interior of a Room.

" It is not necessary that these should all be drawn at one and the same time, and the teacher should in no way influence the children.

" 2. *Story Drawings.*

" Have your children listen while you read the following little poem. Then tell them you are going to have them draw pictures to this story, and have them listen while you read it once more slowly through. Then have them draw what they like. Please have no talk to introduce the matter, answer no questions, give no suggestions whatever, and avoid emphasizing any particular part of the story as you read. Please write the time taken for drawing. It would be interesting to read the poem to the class at some later period, and have them write it out as a reproduction lesson.

As he trudged along to school
It was always Johnny's rule
To be looking at the sky
And the clouds that floated by ;
But what just before him lay,
In his way,
Johnny never thought about ;
So that everyone cried out—
" Look at little Johnny there,
Little Johnny Look-In-The-Air."

Running just in Johnny's way,
Came a little dog one day ;
Johnny's eyes were still astray
Up on high in the sky ;
And he never heard them cry—
" Johnny, mind, the dog is nigh ! '
What happens now ?
Bump !
Dump !
Down they fell, with such a thump,
Dog and Johnny in a lump !
They almost broke their bones
So hard they tumbled on the stones.

Once with head as high as ever,
Johnny walked beside the river.
Johnny watched the swallows trying
Which was cleverest at flying.
Oh ! What fun !
Johnny watched the bright round sun
Going in and coming out ;
This was all he thought about
So he strode on, only think !
To the river's very brink,
Where the bank was high and steep,
And the water very deep ;
And the fishes in a row,
Stared to see him coming so
One step more ! oh ! sad to tell !
Headlong in Poor Johnny fell.
The three little fishes, in dismay,
Wagg'd their heads and swam away.
There lay Johnny on his face
With his nice red writing-case ;
But as they were passing by,
Two strong men had heard him cry ;
And with sticks, these two strong men
Hook'd poor Johnny out again.

Oh ! you should have seen him shiver
When they pulled him from the river.

He was in a sorry plight,
Dripping wet, and such a fright!
Wet all over, everywhere,
Clothes, and arms, and face, and hair,
Johnny never will forget
What it is to be so wet.
And the fishes, one, two, three,
Are come back again, you see;
  Up they came the moment after,
To enjoy the fun and laughter.
Each popped out his little head,
And to tease poor Johnny, said,
"Silly little Johnny, look,
You have lost your writing-book!"
Look at them laughing, and do you see
His writing-book drifting far to sea.

"I have chosen this poem because all previous experiments have shown it to be suitable to *all* ages, and because excellent translations exist in fourteen languages. I am trying to obtain drawings to this poem from every corner of the globe, and believe these drawings will be the most useful for comparative studies. You would particularly oblige me by collecting drawings under this head.

III. BIOLOGICAL SERIES OF DRAWINGS.

"Collect sets of drawings all made by one and the same child during the first seven years of life. Be careful to make exact notes what the drawings represent and what occasioned the child to make them.

IV. DRAWINGS OF ADULTS.

"These drawings should not be made by people who are accustomed to draw in their profession. Thus, drawings by artists, art-teachers, and such like, should not be collected for this purpose. Adults might draw the same pictures as is suggested for children under the headings of 'Spontaneous Drawings Proper' and 'Special Drawings.' This group should also include drawings by adult Negroes, Indians, Eskimos, South Sea Islanders, and so forth."

The Library.

Report of the Director of Education, Transvaal and Orange River Colony. Johannesburg.

To all who take an interest in the best form of Colonial development, as well as to any who should be making a study of educational administration, this bulky volume of 164 pages (quarto) would be invaluable. Herein is the story of Mr. Sargent's work from the time of his arrival at Cape Town, in November, 1900, until his appointment as Education Adviser to the High Commissioner and Governor at the close of July, 1903. This report is no mere bundle of statistics—they, indeed, are comparatively few—but a most readable outline of the progress of the work so far done is given, with a statement of the liberal principles by which it has been guided. Then follow various appendices, giving Education Ordinances, Extracts from Letters to and from the Director, Extracts from Reports on various Institutions, and, perhaps most interesting of all, Extracts from various Addresses delivered by the Director himself. Surely, never was more done in so short a space of time, and under such great initial difficulties, to organise a system of education. Mr. Sargent has reason to be proud of his work, and the nation to be grateful to him.

T. G. T.

Educational Review. New York, June, 1904; September, 1904. Vol. xxviii.; Nos. 1 and 2. 1/8 per copy.

These two issues contain little having special relation to English educational conditions, except that the June number contains a valuable bibliography of education for 1903. Books on Child-Study are purposely omitted, as these are sufficiently considered in Louis N. Wilson's bibliography in the *Pedagogical Seminary*. The first article in this issue deals with "Progress in Religious and Moral Education," and has much to say concerning Sunday Schools and the Religious Education Association.

The review is not issued in July and August; the September number opens with an article by Dr. W. T. Harris, on the Reports of the Moseley Education Commission, consisting mainly of copious extracts from the several Reports, he himself pointing the moral. In defence of the apparent superficiality of American education, and its lack of attention to details, Dr. Harris urges that "directive power must not let itself be absorbed by details so much as to lame the power of combination and the sound judgment as to what ought to be done under the circumstances—so much as to destroy the alertness in fact." This article well repays reading even by those who have studied the Report itself. A short article on "English in the Elementary School" contains much practical suggestion, and another on "The Degree of Doctor of Philosophy in the United States" makes one understand more clearly the somewhat unhappy variety in University standards. The number concludes with an article by Mr. Clondesley Grereton on "The New Way of Teaching Classics in Germany."

T. G. T.

The Pedagogical Seminary. Vol. xi., No. 3.

The first article in the September issue is contributed by Miss Kate Stevens, of London, England. It gives a sketch, short, but packed with information, of the education of the Mohammedans during the Middle Ages, a subject about which too little is generally known. Miss Stevens shows how much modern civilization—medicine, agriculture, and the textile arts, Mathematics, Astronomy, and the exact sciences, generally—owes to the labours and liberality of the Arabs. Bagdad, Damascus, Cairo, Cordova, and many other cities were centres of learning and research when the North and West of Europe were intellectually waste places. Spain had then a fully-developed system of public instruction from primary school to university. Miss Stevens gives a synoptical table of the chief Mohammedan writers and their works from the eighth to the fifteenth centuries.

The next article is a study of the little daughter of Professor A. F. Chamberlain, of Clark University. Observations have been recorded by both parents : those here given belong mainly to the third year. The study affords very valuable comparative material, as the subject is an only child, who has always had numerous playthings and the continuous companionship of both parents.

The observations are classified under the heads : (1) Affirmation and Negation ; (2) Analogy, transferred meaning, etc. ; (3) Argument and expostulation ; (4) Comparison ; (5) Definitions ; (6) Fear ; (7) Imagination ; (8) Nature Observations ; (9) *Obiter dicta* ; (10) Poetry and Song ; (11) Right-handedness ; (12) Stories ; (13) Spontaneous formation of words ; (14) Spontaneous language ; (15) Talk ; (16) Time.

Numbers 2, 5, 7, and 8 give valuable insight into the mental development of a child in this specially selected environment.

Some of the terms used to describe the phenomena are lacking, surely, in exactness and accuracy. " Imagination," for instance, has now one or more fixed meanings in the psychology of adult mind that unfit it to describe the rapidly-changing fancies which a child of two-and-a-half years may express in " Story and symbolic plays " ; and the voluntary exercises and play at combining sounds—babbling—recorded on pages 283–287 are incorrectly described as word or language formation, since the child is not seeking to communicate ideas by these plays.

This very point—*originality* in the development of speech in early language—is discussed in a later article called " Speech Development in the Child," and the writer reaches the conclusion that originality in language formation is very rare in the young child. Other subjects also reviewed in this article are the Order of Speech development, the Recapitulation theory, the Development of word-meaning, and the Pathology of speech development. The last division gives the fullest exposition that has yet appeared of the causes and remedies for stuttering and stammering. It appears that in Denmark, Germany, and Hungary, the State provides special corrective treatment for defects of this kind in school children.

Dr. Hodge, of Clark University, contributes the first of two articles on " Biology in the Secondary School." Readers familiar with his book on " Nature Study " will find here the same ideas, with suggestions, examination questions, etc., intended to meet the needs of older children. Dr. Hodge places a much higher estimate on the value of both material and method when Biology in the school deals with large wholes from the side of life and force than when it is occupied with the dissection and detailed study of the structure of type forms.

As this number is the last of the year 1904, the Librarian of Clark University contributes a " Bibliography of Child-Study for 1903," a roll of 486 items.

Child Life. No. 24, October, 1904, and No. 25, January, 1905. George Philip and Son. 1/-.

To the field of Child-Study belong, in the October journal specially, " Fairy Tales and My Library," written by a child of eight, and in the January number, " Barbara," observations of a child of six. The former is the more valuable, in that it gives only the child's productions; in the latter the writer mixes observations of the child with the reactive effect of the child's doings in the observer, a way of recording observations that may be picturesque, but which is annoying to the serious student. The strongest article, (begun in October, and completed in January,) " Is Development from Within ? " is contributed by Mr. E. Cooke, as a reply to an attack on one of Froebel's fundamental principles, made by Mr. Graham Wallas nearly three years ago. Mr. Cooke vindicates Froebel's position both as philosopher and scientist by tracing the history of the doctrine of " Development " back to the time of Kant, and setting out the relation of Froebel to former contemporary and subsequent thinkers. Froebel is only now beginning to receive his due recognition as student and philosophical thinker, and Mr. Cooke's articles should serve a wider purpose than that immediately in view: stripped of their controversial character they appear as an original and valuable contribution to the History of Educational Theory.

The October number contains a short discussion by Professor Earl Barnes, on " The Place of Drawing in Elementary Schools." It was evidently written, in the first place, for American schools, as it criticises the "type" system of teaching the elements of form from small-type models. With Professor Barnes' view that "the constant, spontaneous expression and the exact definite work should go side by side from the first," we should be inclined to disagree. Spontaneous drawing may begin between four and five years of age; exact work should surely be deferred three, or even five, years later.

With some things in Miss Wood's article on "Co-Education up to the age of Twelve" we cordially agree, but when Miss Wood passes on to advocate co-education up to the University we want to state the other side of the question. Miss Wood, we think, gives only a part of the foundations of some of her arguments; speaking of women teachers in America, she quotes Dr. Gray, of the Moseley Commission, on the "healthy and robust view of life that obtains in American student life." The writer arrived at the opinion when studying in an American University that this admirable feature in the life of the students is due mainly to the fact that the mass of them have grown up on American farms, than which there is no better rearing ground for young human beings.

Suggestions by the Froebel Society for the education of "the child under five" shows clearly in the preface the influence of the Child-Study movement of recent years on educational theory. Not that in the main these suggestions differ from methods advocated by Froebel, but they show that Froebellians are now laying the stress of their work on parts of Froebellian theory which they have treated more or less coldly in the past.

Other contributions bearing on Class-Room practice are: "Geography," by Miss Michaelis, and Professor Patrick Geddes on "The Correlation of Studies," both in the January number. This gives also a brief history of the Froebel Institute. It has now entered on its tenth year, and arrived, we hope, almost at the established position that its first Principal, Madame Michaelis, so ardently desired to see before her death. Although she resigned her Principalship three years ago, she remained closely connected with the Institute, and it will therefore greatly miss her frequent visits. Her death has taken also from the Child-Study circle a constant supporter and sympathiser. M. E. F.

Archives de Psychologie, Geneva. No. 12, July, 1904; 3 fr., 50. No. 13, August, 1904; 4 fr. No. 14, November, 1904; 5 fr.

In these numbers the article that most nearly concerns us is one by M. Schuyten, in the November issue, on "How ought we to measure the Fatigue of School Children?" Methods that have been adopted are first reviewed—Dictation, Reading, Arithmetic, Tests for Voluntary Attention, Memory Tests, have been pressed into service, together with the æsthesiometer and the ergograph. It is pointed out that though these psychological and psycho-physical methods have generally pointed to the morning as the period most remunerative for teaching purposes, this opinion has been pronounced with varying degrees of emphasis, and even with hesitation by some. Yet the opinion of such medical men as have considered the subject has been generally emphatic, that attention is stronger in the morning, that childish maladies are more common among children with than among those without, afternoon instruction, and that both the number and frequency of the maladies increases with the length of class hours. It may be pointed out that all these investigations were Continental, and the conclusions might not apply with equal force under the somewhat different conditions that hold in England.

M. Schuyten then gives an account of some of his own experiments. In the first case he had certain combinations of letters, not making words, written upon the blackboard by the teacher, and copied by the children, five minutes being allowed for the purpose. The tests were given to children of about the same age, boys and girls, in twelve classes of six different schools, and in order to further test his theory of the effect of "commencement" upon tests (see Review *Paidologist*, vol. vi., page 110), the first test was in some cases given in the morning, and the second in the afternoon, whilst in the other instances the reverse process was followed. His formerly advanced theory that the interest taken in the first test unduly favoured the result did not hold here; on the other hand, the unusual character of the work performed had an unfavourable effect, for in almost all cases the first test showed a greater number of mistakes and omissions than did the second. But equally general was the result that the afternoon tests showed a greater number of corrections than did those of the morning: this, he suggests, is due to defect in voluntary attention, but concludes that the psychological method bristles with difficulties.

Further experiments on some three hundred children with the dynamometer show that during the first half-hour in school there is an increase in energy, which then begins to fall off. A similar result was obtained in Chicago, with the ergograph. He specially tested two sets of five intelligent pupils, whose interest in the experiments he carefully enlisted, in the one case beginning in the morning, and in the other in the afternoon, and points out that in either case the general results show a falling off in the second experiment. Then, having carefully gone out of his way to excite special interest in these few children, he concludes that interest in the first experiment is a vitiating factor, although he has just shown that in the case of the three hundred pupils it was the second experiment, given half-an-hour after the first, which gave the better results. M. Schuyten also experimented with the æsthesiometer, on a few pupils, and by this the loss in power of attention in the afternoon was most clearly shown.

The author insists that any description of such experiments should state as clearly as possible all the conditions, as these must have a profound effect upon one's judgment of the results, and concludes that there can be no doubt that the voluntary attention of children is less in the afternoons than in the mornings, but that it has not yet been proved that the later session "is inferior from the point of view of all the faculties of the child."

Those interested in Hypnotism should read an article in the July issue on "Choregraphic Somnambulism," illustrated by some fine plates. The case investigated is held to support the theory that the subliminal ego possesses qualities superior to those of the ordinary ego, and it is the breaking of these forth to the light of day that constitutes genius.

Another interesting article in this issue discusses the problem, "The Seat of Conscience in Modern Psychology," concluding that no definite seat can be assigned to it.

An article on "The Internal Language of Children," by M. Lemaitre, in the August issue, forms a valuable contribution to the discussion of the differences between motor, visual, and auditive factors in children. The author holds that the connection between these is more complex in the young than in the adult, when one centre tends to gain predominance over the others. The verbal memory of motors is probably not as good as that of visuals or auditives ; visuals, and especially visual motors, are generally the most artistic ; the auditive appears to hear within him the voice of reproach or remorse ; the motor is led by his repentance to act, to kneel, to pray, for example ; whilst the visual will pass more easily from sorrow to joy, and will search for the new rather than ruminate on the old. But the article contains too many examples to be adequately summarised here. In this issue there is to be found also a "Consideration of the Power of Suggestibility among the Nervous," by M. Schnyder, and a "Note on a Realised Prophetic Dream," by M. Flournoy.

T. G. T.

Infant Schools—History and Theory. By DAVID SALMON and WINIFRED HINDSHAW. 312 pages. Longmans, Green, and Co.

The Infant School, as we in England know it, is an especially native product of educational activity, and there is nothing quite comparable to it in America or in the other chief countries of Western Europe. Various factors, such as zeal for social reform, and religious influence over the young, legislative action, and the doctrines of educational theorists, have all contributed a share to the foundation and development of this section of our primary school system. The first part of this book sets forth, in brief compass, the mode in which these various elements have co-operated in the evolution of the Infant School. In the vexed question as to whether gratitude is chiefly due to Robert Owen or Samuel Wilderspin for pioneer work, the author inclines to the former, and the efforts of both of these men are treated of in some detail. The part that the Education Department and various Code makers have played in moulding the organization and curriculum of the Infant School is briefly sketched, and a short account is given of the chief men and women who have interpreted the ideas of Pestalozzi and Froebel to us. We are living now in a transition period, in which Froebelian principles and practice are modifying the older type of Infant School, and it is partly because the latter, cast into fixed forms by successive Codes, had become so thoroughly established in our midst, that the Kindergarten, which is a part of the American common school system, is unknown in our scheme of primary education.

Mr. Salmon's narrative of the development of the Infant School is clear, simple, and interesting. In reading it we realise how completely the work of teaching the youngest children in our primary schools, at first chiefly in the hands of men, has gradually become monopolised by women, who certainly seem naturally more fitted for it.

The second part of the book deals with the theory underlying Infant School Work. Miss Hindshaw here combines personal experience of young children and their education with relevant gleanings from the psychological investigations of G. F. Stout and William James, and the Child-Study work of Preyer and Sully. The developing life of the young child is traced, and counsels with regard to his teaching and training are based upon the study of his physical and mental growth. Froebelian doctrines as set forth in the *Education of Man* and the *Mutter und Kose Lieder* are presented, and the book concludes with a chapter pointing out the necessity of extending the Kindergarten principles and practice to the lower classes of the boys' and girls' schools.

The book is a text-book, and as such admirably adapted for young teachers who are in training for work in Infant Schools, as it summarizes and presents in readable form the latest ideas in Infant School Pedagogy. S. Y.

The Fourth "R" in Education. By Rev. J. O. BEVAN. Educational Supply Association.

Despite the somewhat fantastic title of this pamphlet, its contents are wholly wise and reasoned. The author deplores the fact that children too often regard "the end of school as the end of learning," and he considers that the school system, and not the children, are to blame. He urges, therefore, such a revolution in the methods of dealing with the child during its school life as may promote the habit of "after-study" when his nominal school days shall be over. He reviews various reforms and devices to this end, most of which, happily, have been tried in various cases and under diverse circumstances, but which the author thinks should be universally adopted. Amongst these are the bettering of the school environment, the school joinery, manual work in other than the orthodox forms, the establishment of holiday schools, and a modification of the holiday system. It is gratifying to note that an employer of labour in the Midlands, after perusing this report, has set himself to work systematically to foster "after-study" interests among his workpeople. Indeed, the strongest part of this appeal is that in which the author begs "those who know" to help to broaden the aristocracy of learning into a democracy. M. M. P.

Vaktydschrift voor Onderwyzers (Professional Magazine for Teachers). Edited by Messrs. BIGOT, HOLTZAPPEL, SCHREUDER, and ZERNIKE, and published at Groningen by Mr. J. B. Walters.

This Magazine is published bi-monthly, and this is the eighth year of its publication. The numbers before us contain most interesting articles on Education, useful for both teacher and parent in and out of school, also practical lessons on different subjects, such as Geography, Nature Study, Arithmetic, Singing, etc., besides illustrations of the Teachers' methods and treatment for the formation of character, etc.

Each number gives a list of the newest school books.

W. V. P.

Mothers and their Responsibilities. By MARGARET E. BAILWARD. Longmans, Green, and Co. 145 pages. 2/6 nett.

This is a simply-written little manual suitable for mothers who have little acquaintance with books and their lore. Its tone is distinctly religious, and useful counsels for the moral training of the young at all stages of growth are given. It is designed especially for religious and other societies which seek to help the unlettered mothers, and as such should be of much use.

The Work of the Prophets. By ROSE E. SELFE. Longmans, Green, and Co. 2/6 nett.

This is a useful help for elder children to the better comprehension of what are well known to be the most difficult parts of the Old Testament. The style is simple and interesting, and several beautiful illustrations, reproductions of famous pictures, add to the value of this little book.

BOOKS RECEIVED.

Infant Schools—History and Theory. Longmans. Green, and Co.
Mothers and their Responsibilities. Longmans, Green, and Co.
The Work of the Prophets. Longmans, Green, and Co.
The Fourth "R" in Education. Educational Supply Association.

MAGAZINES RECEIVED.

Zeitschrift für Padagogische Psychologie, Pathologie und Hygiene. Walther, Berlin.
Archives ae Psychologie. Geneva—London: Williams and Norgate.
Parents' Review. Kegan, Paul and Co. 6d. monthly.
Child Life. George Philip and Son. 1/- per quarter.
Educational Review. Educational Review Publishing Co., New York. 16/6 yearly.
Vaktijdo-chrift voor Onderwijzers. Amsterdam.
Teachers' Institute Magazine. Kellogg and Co,, New York.
School Review. Chicago. 20 cents monthly.
L'Education Familiale Review de la Ligue Nationale, Bruxelles.
La Gymnastique Scolarie, Bruxelles.
L'Etude. Philadelphia. 15 cents monthly.
Indian Journal of Education. Madras. 10 annas a month.
Japanese Magazine of Child-Study, Tokyo, Japan.

CHILDREN'S DRAWINGS.—BIBLIOGRAPHY.

Additions to Miss S. S. Partridge's List.

COOKE, E. "The Method of Nature is the archetype of all method considered in relation to drawing and children's drawings." The *Scholastic World*, November 1, 1878.

COOKE, E. Discussion on Drawing. Health Exhibition, 1884. Conference on Education. Vol. XIV., pp. 246-252.

The Branches.

No greater testimony could well be given to the influence of Professor Mosso's book on "Fatigue," than the fact that this Session three of the Branches of the B.C.S.A. (Birmingham, Liverpool, and London) have included the subject among those set down for consideration: and, generally, the line of approach is that of the physical nature of the child. Edinburgh, continuing its preference for "courses," has a very attractive one on the "Environment of Children"; Liverpool discusses "Second Dentition" and "Physical Development"; Birmingham considers the needs of Infant Schools; London the necessity of Nursery Schools; Derby, at present, discusses nothing but the Conference, which is to be held there from Thursday, May 11th, to Saturday, May 13th; and, as members of other Branches can testify, the matter is sufficiently weighty.

Meanwhile, the London Branch is considering the advisability of amalgamating with the Childhood Society. The anomaly of having two societies working in the same city and covering similar ground had not escaped notice, and some years since the question was considered, but no conclusion was reached. This Session the Council of the Childhood Society invited the London Committee to again consider the matter, and the result, so far, is to be found set forth in the London Branch Report. It is hoped that some definite proposals may be submitted to Conference.

An important development from London has been the formation of a West Kent Branch at Tunbridge Wells, the inception of which has been due to Dr. Hamilton Hall, a Member of the London Committee, and Miss F. J. Watt, who has been elected the first Secretary of the new Society. An auspicious start has been made, and the fact that the inauguration took place in connection with a meeting of the National Union of Women Workers is a sufficiently encouraging sign of the times.

One sentence in the rules of this new branch is noteworthy. *Every Subscriber shall receive "The Paidologist," the official journal of the Association.* By this decision Tunbridge Wells has joined the Derby, Edinburgh, and London Branches, not to mention the many weighty and learned societies whose members receive equally weighty and learned volumes of transactions in return for their subscriptions, often sufficiently high. The objection immediately arises that *The Paidologist* is neither weighty nor learned—but as rapidly comes the reply, that if desirable it is in the power of the Members and Council to make it so—and the method lies along the road of further support.

One returns to the subject at the risk of being voted wearisome, conscious of all the seeming indelicacy involved in assuming the *rôle* of the tradesman. But the gain will not be to us but to the Association—and we venture. Spite of the increasing number of copies disposed of by some of the Branches to non-members, the total number sold of each issue always falls below our membership. Hence, though we have reason to hope that our magazine is being more favourably received, each year's working involves a call upon certain generous subscribers, a fact which should be regarded as a personal matter touching the self-respect of every member.

T. G. T.

Branch Reports.

BIRMINGHAM.

President—Prof. J. H. Muirhead, M.A.
Hon. Secretary—Miss A. J. Dawes, L.L.A., 75, Gladstone Road, Sparkbrook.

At the Meeting of November 15th a Paper on "Music for Little Children" was read by Miss Woodward, of Edgbaston Froebel School. She said she wished to encourage the taste of music among the children so much that, even if they could not be performers, they should have the receptive side developed in order that they might at least become reverent critics. The music teacher for little children must be musical, not necessarily a musician. She must have sympathy with the children, and she must also understand them. The children's music should be a real expression of feeling; it must not be merely a conventional accomplishment. Miss Woodward emphasied the importance of songs being played for children, remarking that the same subtle influence should be derived from the playing of good songs as followed from the good picture in the nursery. The point was enforced by the singing of a number of songs.

The Paper of Mr. Capel Shaw, Chief Librarian of the Birmingham Free Libraries, on "Children's Books," presented to the Meeting of December 14th, received a lengthy and appreciative notice in the *Birmingham Daily Post.* Mr. W. B. Ainsworth, of the Camp Hill Grammar School, followed with a Paper on his experience of the kind of books chosen by boys who had passed under his notice. Both Papers appear to have been extremely interesting and valuable, and warmly appreciated.

The Meeting of January 24th was thus reported in the local press:—"At a Meeting of the British Child-Study Association, held at the Birmingham University yesterday, Miss Z. E. Grimwood (of Brighton) read a paper on "Intellectual Development of Blind and Deaf Mutes." She referred to the great difficulty of conveying abstract ideas to those afflicted persons who had to depend entirely on the sense of touch for their impression of the outside world. Fortunately in such persons the sense of touch was abnormally developed. Some of them could even distinguish between the colours in a plaid ribbon by feeling the slight difference in texture, and others could appreciate music through the vibration of the floor affecting their feet. They could also identify their friends by their characteristic footsteps, and could form a wonderfully accurate estimate of the character and thoughts of a person by feeling the hands. They could also be trained to understand what a person said by feeling the motion of the lips, and to reproduce those motions with the corresponding sounds. In teaching blind and deaf mutes the manual alphabet and the sign language the first difficulty was to get then to understand the connection between a thing and its name. This could be done by attaching to the object a label with the name in raised letters, then using the object and the label separately, afterwards dividing the word into letters, and finally representing the letters by means of finger signs. To show how more abstract ideas may be communicated to the blind and deaf mutes, Miss Grimwood referred to the remarkable achievements of the late Miss Laura Bridgman, a pupil of Dr. Howe, and to the more marvellous accomplishments of Miss Helen Kellor, who went through a college course with distinction with the aid of Miss Sullivan. Miss Grimwood also spoke of the success attained by a pupil of her own in the study of Greek and German by means of the Braille system of embossed writing.

CHELTENHAM.

President—Dr. H. Cripps Lawrence.
Vice-Presidents—Rev. Dr. Flecker and Dr. Pruen.
Hon. Secretaries—Miss Chevallier and Miss Rooney,
Ladies' College.

The second Meeting of the Session was held on October 27th, when Mrs. C. V. Parsons lectured on "A Child's Words and Ways." Mrs. Parsons gave a very interesting record of her observations of one child, the observations extending over a period of seven years, beginning when the child was three years old. The early experiments with language, the delight in colour, and the difficulty of describing it, the influence of pictures, childish fears, the first attempts to realise the accepted ideals of polite behaviour,—these were only some of the points dwelt upon by Mrs. Parsons in what was a most interesting Paper. Some of Mrs. Parsons' observations have been already recorded in *The Journal of Education* and in *Temple Bar.*

On November 15th, Dr. G. E. Shuttleworth lectured on "Morally Defective Children." Children of this kind are not of necessity intellectually deficient. Oppenheimer's view, endorsed by the Lecturer, is that the restraining or inhibitory function is insufficiently developed in them. Thus in a child of this sort the usual ethical development, in harmony with social surroundings, does not take place. He remains a solitary egoist, what Nordau calls an ego-maniac. Moral defect may be due to impulses in excess of the inhibitory faculty, or to absence or deficiency of self-control. In some cases the defect is noticeable from the earliest years of life; in some it is developed at a crisis in physical development; in others it is due to an accident or illness. It is not possible to treat all cases of moral defect so as to cure them: but there are many morally defective children who can be cured. The influences brought to bear must be moral. Life in a public school, or, indeed, in any large institution, is the worst possible condition for such children. A small home in the country, plenty of physical exercise, and manual work,—these are the necessary conditions of recovery. The hope of salvation for these children lies, firstly, in the gospel of love, secondly, in the gospel of work.

T. M. A. Cooper, *Hon. Press Sec.*

DERBY.

President—Miss A. C. Tuke.
Hon. Secretary—Miss Dyer, 17, Hartington Street.

No Meetings have been held since October, except in connection with the Conference to be held here in May. We hope for many new Members after that event. Miss D. Dyer, *Hon. Sec.*

EDINBURGH.

President—Professor DARROCH.
Hon. Secretary—Mrs. ANDREW, 27, Alva Street.

October 27th.—Opening Lecture by Professor Darroch, on "Some Values of and Limitation to Child-Study."

December 7th—The first of a short Course of Lectures on the "Environment of Children." This, by Dr. G. McKay, F.R.C.S., dealt with "Visual Environment," "The Eye, The Mechanism of Sight, and how to safeguard it during School Life."

The Secretary writes: "The first two of these Lectures have been given, and were much appreciated: that of Dr. McKay was of very exceptional interest, and he brought many drawings in to make his meaning clear."

Future Arrangements:—

Wednesday, February 15th—"Auditory Environment," by Dr. George Wilson. Dr. Gunn in the Chair.

Wednesday, March 15th—"Auditory Environment." "Music" by Mrs. Kennedy Fraser. Miss Walker in the Chair.

Tuesday, May 16th—"Hygienic Environment," by Dr. Fowler. Dr. Drummond in the Chair.

The Annual Subscription to this Branch is 3/-, which includes the three issues of the *Paidologist.*

LIVERPOOL.

President—Professor SHERRINGTON.
Hon. Secretary—JOHN HAY, M.D., 7, Rodney Street.

It is gratifying to record that the attendance this Session has been very good, more than fifty Members having been present at every Meeting.

Through the kindness of Professor Sherrington, the President of this Branch, the Society has met in the Physiology Theatre, Liverpool University. The Theatre Lantern has been utilised, and so far, at every Meeting, the Lecture has been illustrated by Lantern Slides. This has added greatly to the interest of the Meetings.

The Society has met four times.

On October 28th, Professor Sherrington gave his Presidential Address on "Growth," in which he pointed out that the study of growth shows that the field of education lies rather in the discovering the original measure and character of the natural endowment of the child, and in the training of this towards directions in which this inborn capital can be best invested.

Dr. W. G. Smith gave a charming Paper on "Fatigue" on the 19th November, 1904. In the course of the Paper he showed that there was a very important relationship between muscular and mental work. Prolonged muscular activity brought about depression of mental power, and that following the mental activity associated with the study of Mathematics there was distinct evidence of muscular depression. In conclusion, reference was made to experimental work, which showed that change of work was not equivalent to rest. and that, in general, the relief which is gained by change of work is small, and is due chiefly to the substitution of easier for more exhausting mental activity.

On December 17th, 1904, a most interesting Paper was read by C. W. Bailey, Esq., M.A., dealing with "The Child as a Creative Artist."

Drawings by children of all ages were thrown on the Lantern

Screen. He dealt with the child's power of expression in both line and language ,and desired that at a very early age children should be allowed to draw from the life. He deprecated what is known as "freehand drawing."

An experiment was made on January 20th, 1904, four Papers being read on the same subject, each Paper illustrating some particular aspect of the matter under discussion, which was "The Second Dentition." Dentist: E. A. Councell, Esq.; Teacher, Miss Florence Sharpley; Parent, Mr. Geo. Bathbone; Doctor, H. Armstrong, Esq., M.D. It was a great success.

The forthcoming Lectures are as follows:—
February 10th—"The Teacher and the Child." W. Hewitt, Esq.
February 25th—"School Methods." Miss Last, of Birmingham.
March 24th—"Some points in the Physical Development of Children." Robert Jones, Esq., F.R.C.S.

JOHN HAY.

LONDON.

President—Sir JOHN COCKBURN, M.D., K.C.M.G.
Hon. Secretary—Miss KATE STEVENS, Carlisle House,
Dartmouth Park Hill, N.W.

One of the most interesting Lectures of the Session was that by Dr. Kimmins, on "The Position and Limitations of Interest," on Friday, November 11th. Whilst fully recognising the place of interest in Education, and admitting that with many its need was apt to be overlooked, the lecturer suggested that there was sometimes a tendency to over-emphasise it and to leave too little scope for effort that might be valuable even if not pleasurable. A vigorous discussion followed.

On December 9th the room was again more than filled, when Miss Kate Phillips read a critical and humorous Paper on "The Need of Establishing Nursery Schools" Miss Phillips' plea was that special central baby schools should be established for very young children of poor parents, in which they should be under the care of a trained nurse with efficient assistants. The suggestion, though on some sides criticised, was, on the whole, supported in the speeches that followed.

On January 13th, Miss K. Stevens commenced a series of Circle Meetings at the Sesame Club, the subject for investigation being Dr. Kirkpatrick's "Fundamentals of Child-Study." Miss Stevens' Paper was a valuable introduction to the study of this book, of which she had formed a very high opinion. The first few chapters were discussed, and it is hoped that other parts will be considered at future meetings.

Meanwhile, the Committee of the London Branch, having received an invitation from the Childhood Society to consider the advisability of amalgamating the two Societies, had appointed as their three Delegates, Miss K. Stevens, Mr. J. C. Hudson, and Mr. T. G. Tibbey. Several Meetings have been held between these and the Delegates of the Childhood Society, Mr. E. W. Brabrook, C.B., F.S.A., Mr. E. White Wallas, and Dr. Kingston, together with Dr. Beach, Dr. Langdon-Down, and Dr. Shuttleworth, representing the Members of both Societies. So far the only result has been the arrangement of a Course of Lectures to be held in common during the remainder of the Session at the Parke's Museum, Margaret Street, W.

*February 9th—"Some Physiological Problems in Education." By G. E. Shuttleworth, B.A., M.D. Chairman—C. W. Kimmins, M.A., D.Sc.

†February 16th—Discussion on the Proposed Anthropometric Survey. Opened by E. W. Brabrook, C.B., F.S.A., J. Gray, B.Sc., Prof. H. R. Kenwood, M.B., Francis Warner, M.D., F.R.C.P., F.R.C.S. Chairman—Sir William Church, Pr.R.C.S.

†March 2nd—"Mental Faculty of the Child: Its Growth and Culture." By Francis Warner, M.D., F.R.C.P., F.R.C.S.

*March 16th—"Fatigue in Children." By Miss Margaret McMillan. Chairman—The Hon. Sir John A. Cockburn, K.C.M.G., M.D.

†March 23rd—"Method of Training Froebelian Children." By Miss Lawrence (Froebel Institute). Chairman—C. W. Montefiore, Esq.

*March 30th—Discussion on Provision made under the Elementary Education Act (1899) for the Training of Defective Children. Opened by Fletcher Beach, M.B., F.R.C.P., G. E. Shuttleworth, B.A., M.D., Mrs. Dickinson Berry, M.D., and Mrs. E. M. Burgwin.

*April 6th—"The Health of Children *Qua* Food and Management." By A. Rabagliati, M.D. (Bradford). Chairman—The Hon. Sir John A. Cockburn, K.C.M.G., M.D.

*May 12th—"Imitation." By Prof. Lloyd Morgan, Principal of University College, Bristol. Chairman—The Hon. Sir John A. Cockburn, K.C.M.G., M.D.

† Arranged by the Childhood Society.
* Arranged by the British Child-Study Association.

This promises to be a very valuable course of Lectures, and should they all reach the high level set by Dr. G. E. Shuttleworth at the opening one the promise will be realised. Dealing first with the localisation of brain functions, particularly with those connected with speech and writing, the Lecturer turned to consider ambidexterity. Whilst giving approval to this, so far as it concerned the training of the larger muscles of both arms, he held that the greater claims made for it had not been justified, and thought that further investigations might possibly bear out some conclusions already reached to the effect that ambidexterity tended rather to lower the possible level of mental achievement. Dr. Shuttleworth then dealt with Dr. Kerr's report on word blindness and word deafness in children, and his conclusions that these conditions were often congenital, but were susceptible to improvement under treatment. Some practical suggestions were considered as to the bearing of these on education and methods of treatment. Among those who took part in the valuable discussion which followed were Prof. Edgar, Dr. Thomas, Dr. Stevenson, Miss Finlay, and the Chairman (Dr. Kimmins).

The Hon. Secretary wishes to remind Members that subscriptions are now overdne.

T. G. T.

MANCHESTER.

President—Sir William Mather.
Hon. Secretary—Miss F. W. Harrison, Ivanhoe, Bowdon, Cheshire.

At a Meeting held on Friday, January 20th, at the Manchester High School for Girls, the speaker, Mr. J. C. Hudson, contrasted the attitude taken towards the child 100 years ago with that taken to-day. Childhood was then regarded as but the feeble, ignorant stage through which all adults must pass, and the path of knowledge was made an irksome, difficult one for the child to climb. To-day, thanks to the influence of Rousseau, Pestalozzi, Froebel, and the work of such investigators as Dr. Stanley Hall and Prof. Earl Barnes, and numbers of sympathetic observers, not only had children's lives been made happier, but child-study of supreme importance, and likely in the future to yield still greater results. The Lecturer gave soms details of recent investigations on Fatigue, which, he said, had already had an influence in modifying school curriculum. Dr. Findlay presided, and there was an interesting discussion,

A Special Meeting was held at the Manchester High School on Tuesday, February 7th. It was largely attended, and was called to submit to the Members a number of proposals which are to be laid before the Education Committees of Manchester, Salford, and the surrounding district. These proposals refer entirely to the improvement of the conditions of infants in our Elementary Schools, and will appear in full in the next issue of this magazine.

F. W. HARRISON,
Hon. Sec. B.C.S.A., Manchester Branch.

TUNBRIDGE WELLS.

President—Dr. HAMILTON HALL.
Hon. Secretary—Miss F. M. WATT, 14, Calverley Crescent.

This Branch is known as the West Kent Branch, and to inaugurate it a Meeting was held at Tunbridge Wells on November 5th, 1904, under the auspices of the National Union of Women Workers, Mrs. Griffith-Boscawen presiding. There had been many kind offers from Members of the London Committee to come and address the Meeting. but as the time for speaking was limited, some had to be asked to defer their visit.

Miss Kate Stevens read a Paper on "Child-Study of To-Day," which was largely an account of the movement from its inception in this country. The Hon. Sir John Cockburn, K.C.M.G., M.D., formerly Minister of Education and Premier of South Australia, addressed the Meeting on "Seedtime in Education."

Dr. G. E. Shuttleworth read a Paper on "Child-Study in relation to Mental Abnormality."

Dr. Hamilton Hall was also to have addressed the Meeting, but owing to the lateness of the hour his address was deferred.

Miss Louch had written many letters of kind advice, and the success of the Meeting was largely due to kind help and suggestions received from Miss Stevens.

The first General Meeting was held on November 16th, when a Committee and Officers were elected, and it was agreed to meet on the last Tuesday in each month.

On December 6th, Dr. Fletcher Beach kindly came down and gave a most interesting Address on "Mental Education." Owing to the very bad weather the attendance was poor.

On January 31st, Miss M. E. Findlay kindly came down and gave a most interesting address on "Children's Drawings." There was an attentive and appreciative audience, many of whom stayed to examine the very interesting drawings Miss Findlay had brought with her,

The Rules are only just printed, before which we could not ask for subscriptions, so we are not quite certain yet of the actual number of Members, probably a few over thirty. By Rule 2 each Member receives the *Paidologist.*

F. M. WATT, *Hon. Secretary.*

Magazine Committee :—

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R. Langdon-Down, Esq., M.A., M.B., M.R.C.P.,
Normansfield, Hampton Wick.

All communications, relating to their respective subjects, should be addressed to :—

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Kingston Hill,
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Miss Young (Reviews and Notices),
Home and Colonial Training College,
Wood Green,
London, N.

T. G. Tibbey, Esq. (General and Branch Reports),
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EDITORIAL.

The Eighth Annual Conference, which was held in Derby last May, passed off very satisfactorily. The opening meeting, preceded by a Reception of Delegates and Members by the Reception Committee, was held at the Technical College, when Professor Muirhead gave an Address on "The Scope and Object of Child-Study." It appears in this number. The Council Meeting took place on Friday morning, and was presided over by Mr. Holman. It lasted a considerable time, as the subjects on the agenda were very numerous. Miss Louch, the Honorary General Secretary, has furnished us with a detailed account of what occurred, and it will, no doubt, be read with interest by the Members. It will be noticed that each Branch is now responsible for a *pro rata* share of the expenses of the Magazine, and that it has been decided to draw up a syllabus on the subject of betterment and working of Infant Schools. This Syllabus appears in this number of the Magazine. In the afternoon a business meeting was held, with Sir John A. Cockburn in the chair, at which the General Secretary's Report was read and the Balance Sheet presented. The proposals made by the Council were described, and the Branch Secretaries presented their Reports. Some suggestions were made for the future working of the Association, and a discussion took place on a scheme for the Betterment of Infants in Elementary Schools, above alluded to. In the evening the Chair was taken by Mr. H. Arnold Bemrose, and Professor Earl Barnes gave a Lecture to a crowded audience on "Some Ways in which Child-Study can give help and guidance to Parents." On Saturday morning Canon Hacking took the Chair, and Mr. Holman lectured on "Some Ways in which Child-Study can give help and guidance to Teachers." There was a large audience, and a lively discussion followed. The lecture appears in this number of *The Paidologist*, and that by Professor Earl Barnes will appear in the November number. Votes of thanks were given to the Technical School authorities, to Misses Tuke and Dyer, who had worked hard to produce a most delightful Conference, to the Lecturers, and to the hosts and hostesses who had offered hospitality to the visitors.

We would draw our readers' attention to the General Secretary's Report, which, with the Report of the Magazine Committee, which is now abolished, and the Report of the Editors of *The Paidologist*, appears in this number.

It has been decided by the Council to hold the Conference at Cheltenham next year. F. B.

[*The Editors wish to remind readers that the views expressed in the various Papers must not be assumed to coincide in all points with those identified with the Association.*]

The Scope and Object of Child-Study.*

By PROFESSOR MUIRHEAD.

I have some difficulty in justifying my position here as President of the British Child-Study Association. I have no claim to speak as an expert, either in Child-Study or in its applications to children's education. My only justification for accepting the honour you have done me in asking me to address you is that I may perhaps claim to stand in some sense between the real students of child-life and those who seek to apply their most important results to the work of education—to be a kind of middle-man or retail dealer of goods I have done nothing to manufacture and have little occasion myself to put to any practical use. It is for this reason that I have chosen a somewhat general title for this address. With no claim to speak on the detailed investigations which for the last quarter of a century have been the glory of psychology, I have constantly had forced upon me by my function as lecturer in a Training College the value of the results that have been achieved by others, and the duty of doing all that lies in my power to encourage the younger generation in its efforts to lay a solid foundation for a future science of education.

What has led me particularly to desire to say something upon The Scope and Object of Child-Study is a growing conviction that in England the study is not flourishing as it ought to do. Neither when measured by the out-put of psychologists, nor by the number of those who show their interest in the study by buying and reading its organs, or by banding themselves together in associations for the study, does this country seem to me to compare favourably with other countries. Assuming this to be a fact, I have been led to ask whether there are any obvious reasons to account for this inferiority, and more particularly whether it is in any respect traceable to avoidable mistakes of omission or commission on the part of its self-constituted representatives. I shall best serve the purpose I have in view if I state at once what I take to be the extent of our short comings, and then go on to explain more in detail what I mean, and the way in which we may perhaps seek to make them good and infuse fresh vigour into the study.

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* Report of the Presidential Address to the British Child-Study Association, May 11th, 1905.

Apart from the causes which may be said to lie in external circumstances, such as the failure of the State and of the Universities to provide for the endowment of research in this respect, and of School Boards and Educational Authorities to encourage careful observation and the collection of statistics on the part of school teachers, there seem to me to be two causes for which students of Child-psychology are themselves mainly responsible. The first is *the acceptance of too narrow an interpretation* of the scope of the study ; the second is a certain *want of conviction* as to the solidity of its basis and its power of supporting a reformed and truly scientific system of education.

1. Child-Study in modern times took its rise in the eighteenth-century movement, which had for its aim greater reality and naturalness in education and of which Rousseau is rightly regarded as the chief exponent. To the pedagogical motive in which it rose has been added more recently the scientific interest springing from the recognition that the child is father of the man, and that to understand the mind in being we must understand it first in its becoming. To Rousseau it was the man and citizen; to modern science it is the mind in its growth and development that is the subject of interest. This is, therefore, the territory alike marked out for the study of its founders and pointed to by modern science—mind in all stages of its development from infancy to maturity, and especially mind at that period, of all others the most interesting and important, when it puts off the chrysalis form of childhood to take on the features of the man. To stop short of this, to draw a line at what is commonly called the child to the exclusion of youth is to deprive the study of its chief interest and importance. Yet it is precisely this that paidologists in England have hitherto done. The mistake has been partly due to the deserved influence of such pioneers in the movement as Professor Sully,* but because we have hitherto confined our-

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* I am glad to notice that Professor Sully, in his paper to the Psychological Conference recently held at Rome, protests against this narrowness as quite contrary to his own intention and deplorable in itself.

selves to the corner of the field that happens to have been first cultivated, there is no reason why we should draw a ring fence round it as we seem to have done by the name we have adopted and declare that it is the whole.

Among other unfortunate consequences of this restriction is the narrow area from which some of the Branches have hitherto drawn their supporters. In some places the members consist, I am told, almost entirely of school teachers, and among these of the teachers of young children. This, I am happy to hear, is not the case in all, some Societies drawing support not only from teachers but from doctors, parents, and those who have the care of special classes of children. But I have yet to learn of any Child-Study Association in England that is largely supported by those who have the care of older boys and girls, not to speak of young men and young women. This ought not to be, and it is something which, so far as our name is concerned, we might immediately set about remedying by a change, for which I am inclined to think the time has arrived. Whatever we think of the value of names in general, where the baptism of a science is concerned, they are a matter of no slight importance. By its name, more than by its works, a science is in the first instance known, and a name with a wrong connotation may convey a wholly false impression of the scope and aim of the investigation. Hence I take it the gain was great when mediæval alchemy was rebaptized into the fellowship of modern science as chemistry, astrology as astronomy, divine knowledge as metaphysics and theology. I suggest that a similar advantage might be derivable at the present moment if we were prepared to convert the ambiguous and misleading hybrid "Child-Study" into some title that would give at once greater definiteness and a wider scope for which we stand. The most natural title and the one most likely to receive the support of the Paidologist is Paidology. It would have the advantage of providing us with a correlative of pedagogy, to which it would stand in the relation of theory to practice or science to art.*

2. The second of the more general causes of the backwardness of the science mentioned above lies in a certain want of clearness and confidence as to the aim it sets before itself and the grounds on which it rests its claim to effect it. The aim is nothing less than the foundation of a true science of education, and the revision of established methods in the light of new knowledge. Such a claim, it need not be said, is likely to meet with persistent criticism from the supporters of older empirical methods—the silversmiths

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* Another suggestion is Meiracology (*μεῖραξ, μειρακίζεσθαι*), &c.

whose Diana is threatened—and it is not to be wondered at if its advocates have sometimes been reduced to silence by the noise of their outcry, or forced to content themselves with defending the positions already won in the interest of the comparatively unoccupied field of infant education. What we now want is greater confidence in ourselves, or, at any rate, in our cause, as one in which the whole future of education in the last resort depends. I shall make, perhaps, the best use of the present occasion if in the interest of a more aggressive and self-confident paidology I try to restate the leading objections of our opponents and the considerations by which, in my view, they are to be met.

The main argument against the possibility of a science of education is founded on the inherent difficulties of the investigation and the unreliability of the data, on the basis of which wide-reaching alterations in our present system of education are proposed. To this is sometimes added that even although the paidological conclusions were more solidly founded than they are, their application to the actual problems of teaching must be more or less experimental, and that we have no right to sacrifice the present interests of children to a visionary improvement in the future.

It is obvious that the answer to the latter argument depends to a large extent on the answer to the former, seeing that if the psychological conclusions are sound no permanent progress can be made by a system of education that ignores them, and any failure at once to put them into effective operation must be owing to the ignorance or awkwardness of the teacher. But before passing to the more important point it is worth while noticing that the latter argument can only be consistently urged by opponents of all change in existing methods, and that to these it is a sufficient answer to point out that by its nature all education must be more or less experimental, the only question being whether we shall conduct our experiments on the basis of the best acquirable knowledge and in search of an answer to some definite question, or go blindly on in the track marked out by custom, putting no clear question to ourselves, and seeking to test our results by no standard but the past.

Turning to the first of the above objections—the unreliability of the data obtainable by existing methods in the field of paidology, it may, I believe, be shown that it rests largely in a misunderstanding (rapidly becoming culpable) of what these methods are, and of the extent to which the patience of investigators has already overcome the acknowledged difficulties of the study.

1. It is a mistake to regard the data as wholly dependent on the special investigations of genetic psychology. To a large

extent they are independent of them or only appeal to them for confirmation of deductions from the accepted laws of growth and development. As an illustration of such a law we may take the evolutionist's generalisation that differentiation of nature tends to follow on differentiation of function and that such differentiation is a mark of advancing development. This law modern sociology has not been slow to apply to the sexes, and to criticise in the light of it Plato's claim to treat difference of sex as an accident that may safely be neglected in politics and education. What the true deductions from this in the field of education are, whether it points for instance to a reasonable separation of the sexes and the adaptation of school and college training to the special needs of each, or to a system of co-education which shall aim at supplementing the defects inherent in the qualities of each sex, is, of course, a subject of grave concern to educationists, but that there are deductions of far-reaching importance to be drawn from this differentiation of function, no one who has any belief in the existence of immutable natural laws can for a moment doubt.

As another illustration we may take the law that the individual tends to reproduce the stages through which the race has passed. This, I take it, was the foundation of Frœbelian pedagogy, but its significance for education was far from exhausted by the applications which Frœbel made of it. Its authority has recently been invoked, both in connexion with literary and scientific instruction, in support of more natural and more fertile methods. Thus it has been urged as an argument in favour of far greater attention to spoken as opposed to written expression, that the race spoke aeons before it could write, and that paper and pens are toys of yesterday, our preoccupation with which has acted unfavourably on the power of ready and articulate thought and expression. Similarly on the side of natural science this law has been appealed to as an argument in favour of early nature study. One of the most interesting chapters in President Stanley Hall's remarkable book on *Adolescence* deals with the recapitulation in children of early forms of nature worship, and a questionnaire I recently ventured to address to a considerable number of well-known scientific men, in connexion with this subject, has convinced me that marked scientific attainments are in most cases merely the development of an inherited feeling for nature, which, when it has been free to do so, has manifested itself by unmistakeable signs in early childhood.

2. Other data, while founded on inductive evidence accumulated *ad hoc*, are as definitely verifiable as those of the physical sciences themselves. This is true of the rapidly accumulating statistics as to the order of development and the

relative rates of growth of the different parts of the body, including the nervous system. It is mere obscurantism to maintain that the results thus obtained may be safely neglected by those who are concerned in suiting physical and mental instruction in the different stages of human development. To take only a single instance. If, as is physically demonstrable, the auxiliary muscles (with the corresponding brain centres) have a start of the more basal, and are ready at an earlier age to receive the stamp of habit and education, the importance of using this comparatively early period of childhood to lay the foundations of the finer dexterities of eye, ear, hand and tongue, such as are involved in artistic or linguistic acquirements, and thus being prepared to give a large leisure for physical expansion at the age of adolescence receives a new emphasis.

On this subject also the epitome of recent investigations to be found in President Hall's book may without hesitation be claimed as of the highest importance for the future of education.

3. Passing to child-psychology in the proper sense of the term, the difficulty of obtaining reliable data has, we maintain, been greatly exaggerated. Although the facts are mental there are many departments of them in which the tests are psycho-physical, and in which they are capable of as exact statement as those of the physical sciences themselves. This is the case with the development of the senses, the power of responding to refinements of stimulus, the degrees and kinds of the image-forming faculty, and of memory. The development of the power of attention and the conditions of its conceptual power, the exercise of judgment, and the capacity to form or follow simple chains of reasoning are similarly capable of measurement by simple tests. Apart from the means thus offered of testing the progress of individual children, these results are likely to throw important light on the selection of the studies most appropriate for an all-round training of the mind, or for the development of the particular aptitudes required by after life.

In the higher field of the will, and the emotions, of moral ideals, and of the development of character we have to admit that reliable data are less accessible, and that the zeal of investigators has sometimes outrun discretion. But it is just here that the well-established results of general psychology in the analysis of volition and the careful investigation of its different types, of the sentiments and the manner of their formation, and of social and individual ideals* make their most outstanding contribution to educational science, and as they come to be appreciated by parents and teachers are likely to have a profound effect on practice.

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* As these are to be found in such books as William James's *Principles of Psychology;* Stout's *Groundwork of Psychology;* Baldwin's *Social and Ethical Interpretations of Mental Development.*

I have tried in what precedes to sketch the true scope of the study for which our Association stands. It is nothing less than the human being in his growth from early infancy up to manhood and womanhood, through all the intervening stages. I have argued that we badly want a name to cover all these stages taken together in contrast to the adult. Failing agreement upon this, it is all the more important not to allow ourselves to become the victims of words, or to permit the study to fall into too narrow a groove. Pedantry is here less of a danger than narrowness. Secondly, passing to the end and object of the study I have claimed that this is nothing less than to lay solid foundations for a science of education with indefinite practical results in the reformation of old methods and the suggestion of new. I have contended that the popular prejudice against the study is founded largely in a misapprehension of the methods that are available for its advancement, and I have tried to illustrate this by a review of some of the methods in question.

Before concluding I should like to say a word on what the English Association, in its unity and in its different branches, may do to further this larger hope.

I have already made it clear that I regard it as a prime essential that we should obtain the support of all sections of the community in any way concerned with mental and physical growth. I should go so far as to say that it might be worth the while of any Society, which has made a wrong start in this respect, to take itself to pieces and make itself up anew on broader lines.

Granted we have Branches which are truly representative in this respect, what should be the main lines of work?

As the primary aim of the Association is to encourage study, the most obvious way in which it can do this is by providing information upon what has already been done. For this purpose a circulating library is a prime necessity. Such a library should contain *(a)* the classical writers on the subject—the "School Fathers" from Plato to Pestalozzi, obtainable on loan; *(b)* good Histories of Education, recent books, the leading journals in America and on the Continent; *(c)* specimen apparatus such as Mosso's ergograph, instruments for taking accurate physical measurements, for measuring reaction time, perhaps (like the books) obtainable on loan.

The meetings of the Society might be made available more than they are for reports by Members upon books and articles which they have been reading, and found suggestive or for explaining and illustrating the use of apparatus.

Probably, there is no Branch which has not been visited at times by the higher ambition of contributing some original research. So far as I have heard, these aspirations have not as yet in England been fulfilled to any great extent. Perhaps it is not surprising. Where it is a matter of judgment I yield to nobody in my respect for collective intelligence, but where it is a question of original initiative it is a comparatively useless instrument. The wind of originality bloweth where it listeth. Societies and Associations only hear the sound thereof, but cannot tell whence it cometh or whither it goeth. Yet even here a Society may be of great use in providing a body of willing workers, ready to furnish carefully collected information to any individual investigator, and of more or less expert critics of any results he may desire to submit to their judgment.

Many societies, however, may feel that even this indirect way of furthering research is beyond their reach. To them remains an equally useful sphere of operation in bringing home to the educational public well-established principles that are more honoured at present in the breach than in the observance. The new Education Act, whatever else its defects, has, at least, the advantage of providing a public authority in every district, which is expected to keep its eye on the whole field of education, and is responsible for its progress and development along the most approved lines. Child-Study Associations might perform a most useful function in collecting facts and statistics as to the most pressing defects of our present system of education, with a view to having them brought before the notice of the Education Authority of their town or county.* But all these are only suggestions, perhaps ideals, not easily attainable What-ever their value in detail I am glad to have had this opportunity of stating my belief that the field this Association represents, whatever the corner of it you may individually chose, the harvest truly is plenteous, it is only the labourers that are few.

Some ways in which Child-Study can give Help and Guidance to Teachers.

By H. Holman, H.M.I.

Mr. Holman said he felt that the subject of Child-Study, and its application to teachers, was a rather superfluous one at a meeting of that kind; at least, a good many of those present were paidologists—probably most of them were teachers. He was sure that a good many of the topics upon which he would touch would arouse lively discussion: that was his purpose. They had already had good discussions on two previous papers, and he wished his to be no exception to the rule. He thought that Child-Study was doing,—and had already done, in fact—a great work. It was undermining and destroying two very common and two very serious fallacies. They had both been mentioned at previous meetings. One was mentioned by Sir John Cockburn, in his remarks from the Chair on the previous afternoon—the fallacy of regarding the child as a miniature man, which had formerly permeated all systems of education. The other great fallacy was the one pointed out by Professor Earl Barnes—that of studying simply the tools, and not the materials. To his mind, the latter was a fallacy of more modern date. It had come with renewed interest in the problems of practical teaching, and represented a very considerable advance in the ordinary school methods, because he thought it not unfair to say that in the early days teachers studied neither their tools nor their materials. They were quite content to go into the school with a book, or with a memory knowledge of certain information, and get the children to have a memory knowledge of that which they—the teachers—were prepared to give. Parents and teachers had both been badly at fault with regard to those two great fallacies: not that they were to be blamed, but to be pitied, because tradition had a tremendously strong influence. The wisdom of this age, and of every age, was always likely to become the tradition of the next generation and of the next age, and possibly the superstition of the age afterwards.

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* The programme which the Derby Conference has devised for the several Branches is a most important step in this direction, and if carried out in the spirit in which it was framed may furnish the basis of most useful concerted action.

Of course, there was a great danger in trusting to instinct. There was true instinct, and an undeniable and inevitable function and place for instinct, in life and in our lives. But, as Professor Barnes had so well pointed out, if we stopped there we stayed at the beginnings of things. Knowledge not only enlarged and enlightened the instincts, but made new, and true, and higher instincts in succeeding generations. And it was from that point of view that he said that those who held that the mother instinct was adequate for the mother functions were under a serious misapprehension and a very dangerous delusion. The mother instincts were beginnings of the knowledge, the inevitable, necessary beginnings of the knowledge of the mother functions—but only beginnings. Therefore he thought that Professor Barnes's

Address was so peculiarly helpful to every loving mother who had the pleasure of listening to him.

How could Child-Study help the teacher ? First, broadly and fundamentally, by helping him to a general knowledge of the child and child-nature. They were always saying that the history of the individual was the history of the race ; and *vice versa.* How often did they see that realised in school methods ? Very, very seldom ! It was so satisfying—one was sorry to find—to use that phrase, which ought to mean so much, but might mean so little. He did not suppose there was a teacher who would not be quite prepared to pledge his or her faith and reputation on the truth of the maxim that the history of the individual repeated the history of the race. Yet, in his experience, 99 per cent. of the teachers ignored that maxim in their school methods. If it were true, —and he thought all philosophers and scientists, psychologists, and educationalists, believed it to be true,—then it was the foundation of all true education. If the child developed as the race, educators must seek to realise in the development of the child all those great principles which the history of the race showed them to have been the principles on which mankind had developed. He supposed that teachers ought to know, at least, the elements of psychology and of ethnology, as a preparation for understanding the child, which was the preparation for training the child. He was afraid they were beginning the other way. They were not to blame for that, but he rather thought it was true that most teachers began, more or less, to understand the child through the training of it, though some rather ambitious individuals went so far as to go in for learning something about the science of the principles of child-nature and human development before beginning to educate children. Given that the teacher had that preparatory knowledge, then it became his business and his duty to understand, to the fullest possible extent, not only the child-nature, but the nature of the children with whom he had to deal, because, while all true principles applied to every child, they applied with differences. To know the child was only to know in part this or that child.

Whilst much good must come to them from the study, there was very grave danger from those people who tried to apply other people's conclusions, and knew neither the method by which they had been secured, nor the principles upon which they were based. He would illustrate that by the case of the Kindergarten. Hundreds and thousands of teachers had accepted certain principles of Kindergarten work. and certain practical methods for carrying out those principles, but had not studied the inner meaning and inner purposes which the famous educationist who put those principles forward had in his mind in perfecting that system. It was wonderful to see the extraordinary mistakes of purpose. aim. and method which such teachers managed to achieve in their very earnest endeavours to carry out Kindergarten principles. He was inclined to think that as that danger was a practical. real, and realised one with regard to Kindergarten work. even more so was it a danger with regard to Child-Study—that they should accept certain conclusions and certain suggested methods without an intelligent understanding—an elementary one, if they liked—of the principles and processes which underlay such conclusions and methods.

He did not believe in what was called the "new psychology." He ventured to think there was no new psychology. They understood the psychology of the child the more they investigated it, but was that "new" psychology? They were apt to mislead themselves when they talked about "new psychology," "new education," "new" this, that, and the other. In a sense it was not wrong, but in another way it was likely to be wrong. Knowledge had its evolution, as every other growth had. All that was new was the development of the old. It was new in that it was realised for the first time. But it was generally because of the old that they were able to realise the new significance. In that sense it was partly old and partly new—that was worth while to remember. He had a very strong suspicion when he heard people very much emphasizing their ideas of the "new psychology" and "new education" that the more they spoke of the new, the less they knew of the old. He ventured to think that the great truths of education would never be unlearned, but would always be more fully learned—two very different things. He also ventured to think that those old, true principles were not only discovered, but were established in their essence and their essentials. It was their duty and privilege to fill in and fill out that knowledge of the essentials.

As to how much Child-Study had achieved, Professor Barnes had already referred to the mass of literature produced in most of the European languages. They certainly had not the final conclusions of Child-Study as a science; but as certainly, he thought, they had the defining and the determining of the fuller knowledge which that work was going to give. Would it not be a scientific mistake to say, in any science: "This is the final and conclusive form of this fundamental truth"? He was inclined to think that, possibly, history could never say so. But he thought they could say: "This is the rock from which it is hewn," and "This is the rock upon which it will always stand." After that, he suggested, the filling in and filling out must ever go on. He thought they very much wanted a history of the evolution of the race, from its purely educational standpoint, and that Professor Barnes ought to write it for them. He was not sure but that the Professor was engaged upon a work of something of that kind. They wanted a specific text-book for teachers and educators on that line. It would be very suggestive and helpful.

He passed on from the general to the individual point of view of the help that Child-Study could give to teachers. His view would embrace some of the subjects teachers taught in the schools.

First of all, he thought object-lessons should be given in the schools, from the point of view of the development of the race, as representing the foundation of world culture. The human race had been educated in the first instance, and in the largest measure, upon the principle of what they called "occupations." For example, primitive people could count up to three, but only a very little beyond that, having been educated thus far, and no farther, by the necessities of their existence, and from the pressure of their environment. It ought to be generally taken to heart that sense experiences preceded knowledge. The object-lesson filled a definite place and function in human education, and therefore justified its pre-eminence in the modern course adopted by schools.

Language, or expression, followed knowledge, although for a time it preceded it, in a sense. Expression was the outcome of knowledge, and in an indirect way, and to a limited extent it might not unfairly be called, not the source, but the extension of knowledge: that gave them the basis of all natural development in their schools. The development of speech was a history in itself. Expression demonstrated the capacity of the human being for speech development. It gave them the outline of the scheme of natural training and teaching. He suggested that mothers, with the knowledge of natural development which they had, ought to handle the child in the earliest part of its natural development. His view of the mother in education was a very high one. While he regarded the school as an indispensable economy of collective life, from the educational point of piew, he held very strongly that it threw upon the mother higher, deeper, and truer responsibility in regard to the education of her child in the beginning: for it was much more difficult to deal with a child who had not been so treated than with one who had been properly dealt with on a system that was scientifically sound. It was strange to think that in the history of certain primitive tribes the art of language was in itself a special study, and any special power therein brought a special reputation and dignity to the persons so accomplished. He believed that in certain tribes the standing and power of individuals depended to a very great extent upon their powers of oratory.

With regard to writing and drawing in their schools, what had Child-Study to say to them? Of course, those two were the development of language. They were means of expression. Writing was, however, the last thing that should be taught. Their drill in letters was an abomination, from the point of view of Child-Study. All drawing in the early years of the child's systematic education—nothing but drawing! That, of course, should be developed methodically and systematically, so as to develop the powers of expression. He did not believe they were wise in the way some of them were handling drawing. He did not consider it wise to let the child continually slap-dash at anything and everything which it had no possibility of expressing with any degree of accuracy. He did believe in first convincing the child of its limited power of expression, and, after suggesting it wanted to acquire that power, saying: "We will help you to acquire it." After that, a graduated rise of progressive skill and progressive attempt, constantly testing but constantly developing the skill of the child, which was its greatest joy, and the greatest inducement to further progress.

Composition: Every child was as full of composition as an egg was full of meat. A baby came into the school class bubbling over with talk. The difficulty after three months was to get the child to speak at all. That was fundamentally wrong. It was ignorantly wrong. That must be amended if they had any ambition to be scientific in their education, or lay claim to the title of paidologists. Narrative was the storehouse of the literature of the primitive races. It was the channel for all the science and knowledge they had. It represented a record—a permanent record from generation to generation—of all their philosophy, religion, art, science, and literature. Even to-day, in remote parts of Ireland, there was the professional teller of the old-folk stories. He was common in Scotland fifty years ago. But the schoolmaster always displaced the story-teller—in many senses. Narrative in its power and influence was very significant. That was why they ought to have so many narratives and stories in their schools. So few did they have! He must have been thought a peculiarly daft inspector to try and get teachers everywhere to have story lessons in the schools. But that was the justification of it. That was the science of it, if there was any science in education. The child—they were in the habit of saying—was "bursting" to talk. They trained the child: how? They taught him, "The bird sings," "the horse neighs." Why, the child had spoken volumes of narrative long before that! There was no greater criticism of their system of education than those wretched composition books as they at present existed. He felt absolutely ashamed of the system of education when he came across those abominations. He had in his possession one of the finest expressions of fairy stories he had ever read in his life: it was by a child, thirteen years of age. One of the most amusing pieces of composition he had seen was the work of a little boy. The function of the teacher was to develop what was in the child. But, "the bird sings!" —did that "develop?"

Reading: Firstly, reading should be a reproducing of self-expression. Had they ever stopped to think how easily a child learned to read who had educated parents? They knew "the trick"; they knew what it "must be." Teachers made it difficult for people to read because they taught them to read. When the child had mastered self-expression, then let it deal with the expressions of others. Then let teachers consider what nature of reading the child liked. Children liked stories full of vigour, vim, audacity, and verisimilitude. The narratives must be catastrophic and full of incident. Professor Barnes's diagrams were most instructive. People wanted the child to be good—not to be a child. They put "moral reflections" at the top!

Music.—He commended to all teachers and those interested in Child-Study the publication recently issued: Mr. Platt's book on *Child-Music*. Mr. Platt gave the phrases his own children invented, from two years of age and upwards. Two of his little people, after getting a certain facility in inventing musical phrases, would sit together: one child would start a phrase; the other would sing it after him, and make the canon, or round—the earliest form of harmonised effort. How interesting! The diatonic scale, he believed, was false: mathematicians said it was false for the human voice—it was meant for the piano.

Reason.—He now came to the master-key of all education. Teachers never thought of training a child's *reason*. But how necessary it was that that should be done. To make a child reason correctly was not training its reason. A Senior Wrangler might, under some circumstances, be found to be a very stupid man, because he had not been taught *reasoning*, but only following certain things up methodically.

Number.—Particularly in number were they nearest to ethnological principles. They could not help themselves. The history of the race accounted for the decimal system. Mathematicians told them the duo-decimal system was the best, but they could not help themselves: they had ten fingers and ten toes. "You know how fingers are used," added Mr. Holman, amid laughter: "Throw away five, six, seven, eight." But to use the fingers was a mistake. After a time the fingers had done their work: the child might "throw away one," or two, but though the one or two fingers might be closed to the palm, and the remainder continues outstretched, he still had the five fingers on the hand, and confusion was apt to be caused in the youthful mind. Then when the teacher desired to take the child a step further, and made it reckon without the fingers, how difficult was it to break off the habit of using them! He had seen some of the most ingenious dodges for illicit counting on fingers, but though they were very amusing, he had no time to describe them, and must hasten on.

Manual Training.—They were just thinking about this. They were going to make another of their beautiful blunders: they were going to learn tricks in woodwork, in cardboard work, in clay, and what not? They were not going to educate in that way. They were going to make pretty things to please those ignorant but amiable people who went to see their schools. Never let them allow themselves to be deceived by the praises of ignorance! But teachers must be aware at such a critical juncture with regard to the development of manual training, that effort, exercises, activity, were the very foundation stones of true education. But they had got to methodise them, systematise them, to make them scientific. Purpose, aim, investigation, constructive effort,—those were the motives of educative manual work. In making a box, understanding the box, analysing the box, from observation, and from the effort of pulling to pieces, and synthesising, they were developing knowledge and skill. He suggested they should lay it down that the instinct of activity, which was common to the human race, was the principle which they had to train in their manual work. They were not hand-training: they were mind-training; they were training the mind through the eye and hand. Unless they had that point of view, they were going to spoil manual work, from the standpoint of education. He suggested for their consideration a little scheme of progress. Play, as common sense taught them, was the earliest step of activity—running, jumping, whip-top, kite-flying. The next step was play-work, as seen in cricket and football, which, though play, required work; all organised games might be included in the term. The next step was work-play. They could illustrate that very well by the Kindergarten manual work. Finally, work. He thought that was the order of development.

Fatigue.—What use of the lessons of fatigue were they making in the schools? Who deliberately said: "It's a dull day: we will go easily"? No; "there is so much to be done this morning." Never mind whether it is bright or dull, whether they felt like doing an extra lot of work or less than usual; so much had to be done, and would be done. He would also draw attention to the teaching of wrong subjects at the wrong times. Then there were the newspaper "model infant schools" and schoolmistresses. If he understood all the great writers on education, he said nothing more controverted the principles of education more than those "model time tables" for "model infant schools." It was a hard thing to say, but it was true. He might be at fault entirely, but so far as he understood education, its principles, and the authorities upon it, those time tables are absolutely contradictions of certain educational principles. Fancy! a whole morning filled up with little else than reading, writing, and arithmetic!

Too Fast and Too Slow Progress.—"So much to be done in three or four months." Yes; that was very common: a certain quantity of work was cut out for so many months or weeks. Frequently work was set out so as to make so much for certain parts of the weeks. Where was the relation of the work to progress, capacity, and skill? He said there was nothing so uneducational as a syllabus which definitely determined what part, and how much, was to be done in three months or four months.

Then came the question of the periods of physical development in their relation to school activity. There were some very serious questions there. Pressure and cram for examinations at the time of great physical change was a very serious thing. He did not know that many teachers were even aware of its existence. It was a terrible question. One could not say more on it. Then there were the periods of greatest growth in the child's life, and the relation of that to activity and work in school.

To sum up in a few words,—how was Child-Study to help the teacher? Well, like all things, by helping him to help himself. It was comparatively easy to get certain statistics, but it was often an extremely difficult thing to understand them aright and interpret them. A teacher once got statistics in reply to a question: "Which subject do you like best, and which the worst?" He found the subject least liked and most hated was geometry. But what was the meaning of it, the interpretation? The subject might have been badly taught, unsuited to such young children; it might have been given too quickly or too slowly. The teacher's judgment was that it was because too much work had been given the boys. They found it a burden to them, and difficult, and they therefore disliked it. So the boys were given less to do. He had another inquiry, and found geometry came well up in what the boys liked best. That was an important principle for teachers to remember: they must test their conclusions always. But, although teachers might not, at present, perhaps, be very competent to undertake it, he thought there was so much good to be obtained from the mere going through of the process—seeing whether their facts were good, whether their conclusions were false, or whatever else might happen. As the late Professor Sidgwick had said so truly about a definition, "a definition is of very little use, but the process by which you arrive at the definition is of the greatest possible use." Teachers would find out this: that more good could sometimes be got from the process than by arriving at conclusions. He suggested that teachers who had not had much experience should repeat some experiment of which they had a full record by someone else in some other school, and compare results; let them see if their conclusion was the right one, and if so, apply that conclusion in practical method, and see what resulted. That sort of discipline would, he thought, be helpful to teachers and very valuable to them, and would train them in Child-Study. Without a knowledge of the elements of psychology and ethnology, their attempts must be but efforts in blind blundering. It was too late for any person to indulge in blind blundering, so long as there existed knowledge which was attainable for them, and conclusions of those competent to undertake investigation. In a word, then, Child-Study would best help teachers by helping them to help themselves.

The Education of Girls.*

By Miss M. E. Findlay, B.A.

For thirty years or so we have been engaged in improving the means and methods of intellectual education for girls in establishing for this end good secondary schools and colleges. The great advance that has been made in this direction must appear vividly before the minds of women contemporaries with myself when looking back on our early school days. It was rare then for the routine of a girls' middle-class school to offer a more nutritious diet than answers learnt by heart from such text-books as Mangnall's Questions. As literature studies, we read without comment or explanation Cowper's *Task*, Milton's *Paradise Lost*. French, Drawing, and the use of the Globes, were extras—" hors d'œuvre " ; German, Latin and Mathematics barely loomed above our horizon. We owe, indeed, a great debt of gratitude to the women whose labours have so completely changed the standard of Girls' Secondary Schools, and in doing this have greatly raised the general estimate of the intellectual capacity of girls and women. When I was a girl the idea that girls in large numbers could profitably follow the same courses of instruction in Secondary Schools as boys, and then proceed to study the same subjects as men at the Universities, would have met general incredulity.

This new view of the talents of women clearly carries with it wide and important consequences for the welfare of the community, and now the time has come to submit the work done during these years, the processes and results, to a critical survey. Periods of reflection should follow, says Herbart, periods of absorption, in order that the position won may be adequately understood before proceeding to mark out new lines for progress.

In attempting to follow out this principle it will be impossible in one discussion to consider more than one part of the large field before us. I shall ask you, therefore, to centre attention on the period of girlhood, which, in relation to mature womanhood, is essentially the Spring season, the time when seeds germinate and deep water springs are stored, *i.e.*, the years of early adolescence. This period varies individually up and down a certain scale, but, on the average, it comprises the interval thirteen to eighteen years. If we include with it the previous year, when the body begins to undergo preparatory changes, we have the range twelve to eighteen. These are, as it were, the chrysalis years of womanhood. During them the entire body experiences transformation and re-adjustment; experts tell us that a physical re-organisation takes place, which is much more organic in the girl than in the boy. The first stage of this re-organisation is marked visibly by rapid growth; between twelve-and-a-half and thirteen-and-a-half the girl may possibly shoot up from two to three inches. An important feature of this rapid expansion,—a feature that has a direct bearing on mental states,—is the divergence in time and rate of growth of different parts of the body; bones may grow ahead of muscles, and then the latter show over-strain by "growing pains"; the heart may lag behind, and then the girl suffers from cold extremities,and she faints from slight causes; nerves are irritable; and girls fatigue more easily than during the previous years. They feel lanky, clumsy, hoydenish, and, like moulting birds, they are inclined to shun society. New instincts are then becoming active in the soul, and old emotions are undergoing transformation. The mental and moral states show the same lack of harmony and balance as the physical constitution. In many cases the affections strengthen rapidly, but they tend to be too concentrated and gushy; temper is fitful, and emotional states markedly inconsistent. The girl is at times more self-assertive, but this attitude is combated by quite a new instinct towards modesty and reticence. She is especially sensitive about her personality, and the physical changes it is undergoing, a sensitiveness that should not be rudely scarred, for it has the value of the sheathing leaves round a bud, or of the case within which the transformation takes place from caterpillar to butterfly: it protects the inner life when temperature and tension are necessarily excessive.

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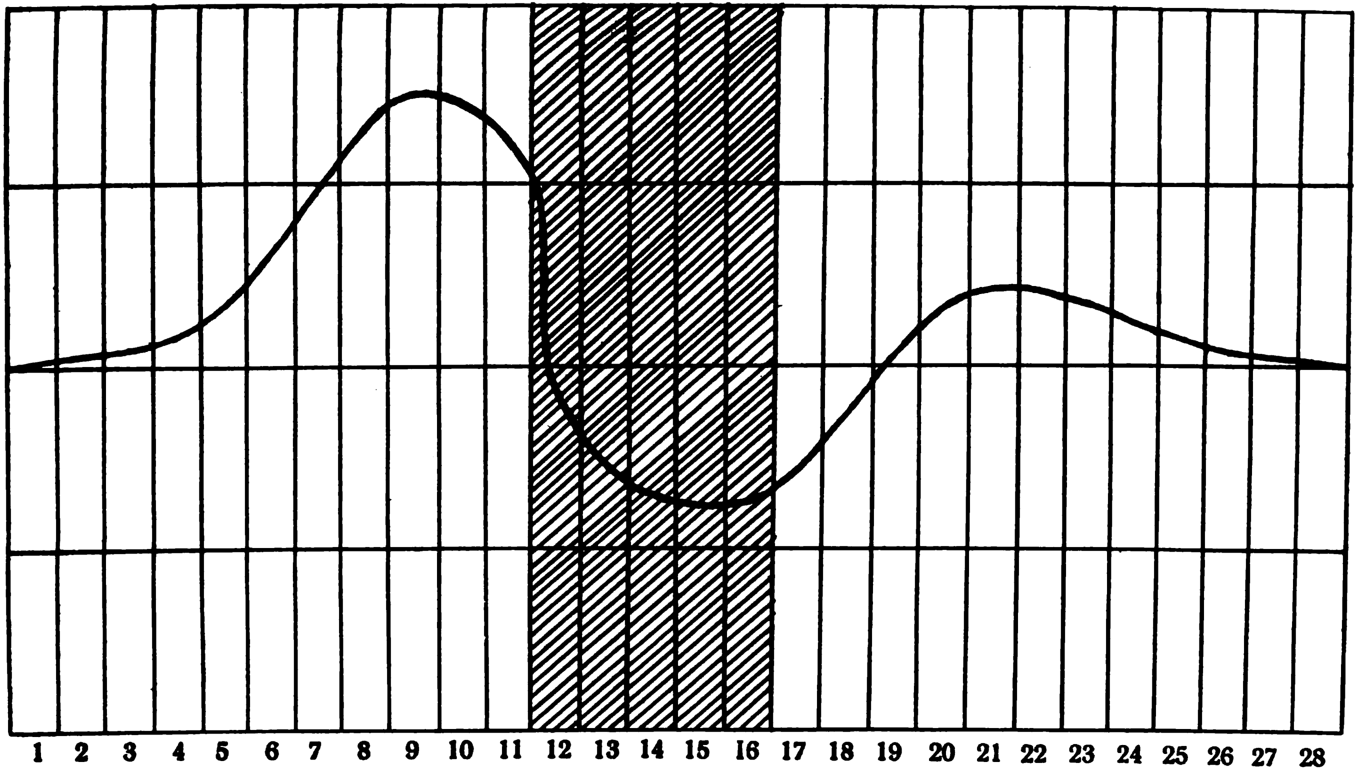
* A Paper read before the Childhood Society, November, 1904.

The second stage is reached when the rate of growth has begun to slow down. Then sharp angles begin to broaden and round out,and enlarging pelvis and breasts tell of the approaching dawn of womanhood. The time when the line is definitely crossed that divides girlhood and womanhood varies in different countries: in England it is usually near the fifteenth



CURVE ILLUSTRATING BLOOD PRESSURE.

birthday; but many causes hasten or retard the time. Whenever the time comes, whether early or late, the first few months of the new life are the most critical in the whole career of the girl, from the point of view of future health and vigour. A rhythm of physical change is then inaugurated which should continue month by month for about thirty-five years; and whether this rhythm will tend to strengthen or to debilitate the whole organism during these years depends fundamentally on the course it takes at the beginning.

To put this difficult subject before us in the simplest way, a friend has kindly had reproduced for me a curve from Dr. Stanley Hall's valuable work on "Adolescence." (Dr. Hall derived it from a Dr. Engelmann). It represents the gradual rise and sudden ebb in temperature and general tension that marks the physical condition of women. The four or five days of ebb (marked by shading in the Chart) are always for all women days demanding precautions against exposure to damp, excitement, and over-strain, and also special attention to diet. In the inceptive period, when the body is adjusting itself to this radical change, nervous instability of a greater or less degree is prolonged, and the girl needs not only extra rest during four days in the month, but also for a period of at least six months, relaxation of mental application, longer hours of sleep, and protection from excitement and fatigue.

The frequency of the maladies peculiar to this period in girls, anæmia and chlorosis, warn us against appropriating at this time energies for intellectual, imperatively demanded for physical, development; that blight of the higher emotional powers, hysteria, can be traced, we are told, usually to shock or over-strain occurring at puberty; indeed, insanities peculiar to women, that may not for some years develop to such a degree that the patient has to be secluded, are frequently due to causes that weigh down the balance beyond point of recovery in early adolescence. Every girl has to pass during her birth into womanhood through a period of storm and stress; and, as every individual is endowed with only a limited amount of energy and momentum, it seems a matter of mathematical certainty that at a time when the more fundamental organs of the body and the deeper emotions are making special demands, the higher forms of brain and intellectual activity must withdraw theirs, otherwise the superstructure will eventually incur the danger of falling through the base being weakened.

I need not point out to you that this principle of considering in the education of girls during early adolescence first their special physical needs, has an importance reaching beyond the life of the individual. Disorganisation of the monthly function unfits women to a greater or less degree for maternity; and further, it is held now by several of the highest medical authorities that taxing the brain at a time when the reproductive organs are acquiring their mature form, is not an indirect, but a direct cause of sterility.

The first suggestion, then, that I would put before you regarding modifications of our present school courses for adolescent girls, is that of clearing away mental and emotional irritants during the years when they need above all an atmosphere that is tranquil and restful. Public external examinations, under the most favourable conditions ordeals to the novice, should be barred between twelve and eighteen years. The girl should be withdrawn not only from late entertainments, but from all exciting dramatic and athletic displays, and even from violent games of the hockey type. For some two years, fourteen to sixteen, or fifteen to seventeen, school hours and school tasks should, I think, be distinctly decreased, and the time thus freed devoted to home duties, a point to which I will return later.

The four most difficult days of the month should be considered rest days, on which, by arrangement between mother and teacher, the girl should not attend school. In a few months the four days may be diminished to two or one, but only in cases where the monthly rhythm is regular, and where it passes without suffering and discomfort.

I have been surprised for years that at the delicate periods, when exposure to cold and damp leads to congestion, and when feeling unwell in the morning the girl hardly takes any breakfast, she should be permitted (this too in Winter) to go to a school where she exchanges warm walking shoes for cold house shoes, where she may sit in rooms with uncarpeted floors with the strata of air near the floor cold, and then after a long fast endure the weary walk home. It is the opinion, I believe, of many medical experts that seeds of mischief are thus rooted which bear disastrous fruit in later life. It is obvious that decreased general application to studies, together with occasional absence, must during these years retard school progress; but it would be wiser to lengthen the course rather than incur the danger of seriously diminishing the power of our educated women. Dr. Manns, Professor of Education at Harvard University, in a recent book, called the *Modern School*, says: "We ought to insist that most girls shall take five years to do the work that boys do in four, *i.e.*, that they shall take fewer studies per year. This would not be a mark of, or a confession of, intellectual inferiority of the girls, but a recognition of the fundamental difference between boys and girls, which it is almost criminal to disregard."

This appears to me the best solution of the problem as to guarding girls from over-pressure during the early teens.

The second point to which I wish to ask your attention is the one that has somewhat suddenly sprung into prominence recently in this country—the question of co-education. Within the last few months I have met with two young women teachers who, without any special preparation whatever, have been put in charge of mixed classes of girls and boys, numbering sixty and upwards, aged thirteen to fifteen; and I am told this arrangement is rapidly spreading amongst the higher standards of Elementary Schools and of Higher Grade Schools, for it is cheaper in schools where the upper standards and science classes are small to combine them. We are thus introducing a system which, after a trial of forty years, an increasing number of prominent educationists in the United States condemn. Our time permits me to point out only two or three of the reasons why, for instance, Dr. S. Hall, Dr. Manns, and others, are seeking in America to modify it; and, indeed, the subject has wider and deeper aspects than we could discuss here.

Statistics of growth have been collected in many countries, and it is fully ascertained now that until twelve years the curves for the sexes of growth, breathing capacity, and endurance, run fairly parallel. At twelve they diverge. The pace of the boy for the next year or two should be kept up or increased in school tasks, that of the girl should slow down. Further, the pubertal climax comes to the girl on the average a year-and-a-half before it comes to the boy, and it is at first in her case a far more disturbing factor. Certain mental and moral features seem to follow the physical, and in these the girl out-runs the boy; others normally ripen later in the girl. For instance, the girl retains, it is said, a quicker memory, but develops later than the boy the adult form of reason. The feature of co-education arousing most anxiety in American Public Schools is that it tends to cultivate precocity and its correlate, too early arrest, in the girls. Girls are more imitative and more affected by an unsuitable environment than boys; sex is a more delicate and profound principle subject to more subtle disturbances during early adolescence in the woman than in the man. A very valuable article on the relationship of boys and girls in American schools, called "Types of Adolescent Affection," by Miss Th. Smith, appeared in the June number of the *Pedagogical Seminary*: this, with the chapters on the Development and Education of Girls, in Dr. S. Hall's *Adolescence*, should give us a better understanding of the necessarily unstable emotional life of girls at this period, and the kind of environment they need. We have already spoken of the concentrated and gushy character of the affection of girls. Miss Th. Smith thinks that the most injurious form it can take is concentration on boys about their own age. In American schools she finds this very common, even from twelve years of age. It has been affirmed that intimacies between the sexes stretching from childhood to youth prevent the development of erotic feelings, but such intimacies are cultivated in homes, not in school classes, subject to constant change and to artificial restraints. When the sexes are put together during early adolescence for instruction in such classes, their peculiar characteristics are more frequently, I believe, emphasized and made prominent. Special sex feeling should, under natural conditions, appear later in the woman than in the man, possibly considerably later; in American schools it tends to shift down and appear earlier. The other types of affection defined by Miss Smith are "concentration on older members of the opposite sex, on members of the same sex of equal age, and on members of the same sex who are older." She deems the last two forms the most healthy.

During the early years of adolescence "affections" are attracted and concentrated by superficial charms, such as dress, manner, voice, and they are fickle and evanescent. As the girl advances in development and experience, they radiate out and broaden. From fifteen onwards, religious and altruistic instincts gain strength rapidly; and towards eighteen there is a marked tendency (provided arrest has not already appeared) to fix the affections on the spiritual and ideal: the girl longs to become a missionary, to regenerate slum life, or to gain such skill in art that she can preach to the world by this medium.

When adolescence, however, reaches its full stature—at twenty-three, or later—influenced then by the surging up of motherhood instincts, the heart conceives desires for the joys and cares of a home and family of its own. Now it is plainly for the good of the race that the adolescence of women should have full development; since, whether married or single, she is the chief guardian of the home, and chief trainer of children. When early marriage is the consequence of too early stimulus of sex feeling a large family of weakly children usually follows; when these feelings are perforce suppressed distraction and restlessness disturb the character; and the younger the girl, the more apt are these traits to become permanent. I cannot help, therefore, regarding the system of collecting boys and girls in flocks day by day at the most critical age as disastrous,—at least for the girls.

The ease with which co-education is spreading is due partly to the fact that it follows logically on the recent trend of the education of girls. The standard in most secondary schools to-day is really planned by associations of men, who primarily try to meet the need of boys' schools. This standard must, I believe, fall before the biological and evolutionary doctrines which are gradually transforming educational theory. Psychology has definitely abandoned, for instance, what is known as the Faculty Theory—that man is endowed with a number of faculties which special mental training will so develop that they can be applied in remote fields of thought. We do not now believe that a pure reason may be developed by the study of mathematics, and then applied in daily business affairs. The new point of view has shifted the emphasis from *faculties* to *instincts*, and it prescribes that those instincts which are of advantage to the organism, should be developed through the presentation of appropriate stimuli. Now the formative time, the time for training on instinct is during its nascent period.

Applying this theory to the education of girls, it seems to me that from early childhood home duties and interests should have a wider place in their education than in that of boys. In the history of the race man has owed his development to such activities as hunting, cattle-rearing, war, politics, activities which have taken him afield; woman, her development, to more directly domestic duties. Domestic culture seems to have special value at puberty: the new affections should be attracted first to the home, and, indeed, as a rule the girl turns with quite fresh affection then to her mother. The dignity and value of the special sphere of her sex are revealed to the girl on the threshold of her adult state nowhere so well as in her own home. And that this revelation should become complete is one reason why some of the school ties should for a couple of years be loosened; opportunity should be made for the girl to be drawn into companionship with her mother, and feel herself her mother's first helper in household affairs.

One objection to thus interrupting some of the school courses will probably be raised—that this more definite home-training might well be postponed until the girl leaves school or college. This is, indeed, the course I myself in past years have recommended when mothers have regretted the little part their elder daughters took in family responsibilities. I have replied that as soon as school lay behind them, the girls would turn with equal enthusiasm to home duties, and would bring to bear on home occupations the intellectual power gained from their school training. I have seen other reasons than the change in abstract psychological theory to doubt this conclusion. Habits formed by years of concentrated attention on books and school studies are not easily shaken off; and, moreover, the details of household management need a kind of mental alertness, judgment, and endurance that is not acquired by school training, with its constant pursuit of book knowledge. I believe there are not a few women who leave well-appointed homes to become teachers, and even to enter offices as clerks and typists, because they have a rooted aversion to the daily round and common tasks belonging to household management. Many girls, when they leave our schools, and good schools too, are found to be misfits in the home—they are without the practical power essential to solving the hundred-and-one daily problems of household economy. This would be largely corrected if, for a while in the middle teens the daughter became the recognised right-hand of her mother. Another reason for giving her for a time wider opportunities than those afforded by school is one that I shall merely mention as having taken definite shape in my own mind when I was for some years Head Mistress of a small High School that owned a Kindergarten. I noticed that girls at about sixteen years of age are specially attracted to young children, and that this interest has special moral value in the case of a certain type of difficult, unbalanced temperament. Any way, it must have deep connections with the motherhood instinct, and should therefore be given scope. It is a time when the mind should rather be fed than disciplined, and the emotional instability renders the choice of diet a very important matter. There is no doubt that at present far too little restriction is placed on the reading of novels and romances of an exciting type. A taste for poetry and crude ideas of beauty and decoration are features of the age, and should be cultivated. We should assign a first place to literature and subjects that cultivate ideals and moral conceptions; then should come music and art.

As the end of the Secondary School period approaches, there should be two new courses, one to give scientific instruction on the special physiological matters pertaining to womanhood and maternity, and also on such problems as the influence of bodily on mental states, of habit on fundamental activities, the duty of temperance and self-control, and the problem of heredity in the reproduction of human life. This course should be given by a specialist, who can treat it in a sympathetic and reverential way.

The other course should deal sympathetically with big ethical and social questions, using for illustration the phases of life already studied in the school course of history and literature. It should seek to give definite conceptions of social relations, and the place and influence of women in community life to-day. I believe such a course at about eighteen years of age despite its inevitable thinness could arouse interests that would endure, and that it would deepen the sense of responsibility. I have been repeatedly struck by the ignorance of girls who have passed through good High Schools regarding many of the biggest problems of life; they do not even know that they exist; perspective is lamentably lacking in their view of the world. Such terms as morality and philosophy convey to them no definite meaning, and though they may have memories stored with much history from previous centuries, they have, as a rule, no definite idea of the constitution of government and of society, of their strength and weakness to-day. *Non scholæ sed vitæ discimus* is an old school motto that needs to be restored as guide for the studies of the year that is to launch the girls into the life of the world.

The girls who pass on to the Universities should find there greater opportunities than are afforded at present for following studies that appeal specially to the deep interests of women. Women will continue to be predominantly attracted by the human and personal side of life. A doctrine called by Dr. S. Hall *radiation* explains, I think, the directions where her special fields of thought and investigation may usually be found. Dr. Hall says that interests must widen out naturally from fundamental instincts—they do not shunt off on to new lines. So social interests, centreing and growing first in the home, should be led thence out to the community, the city, and native land, broadening in the University to Sociology. Psychology, both genetic and analytic, when the methods of study in this subject are revolutionised and made observational, will appeal, I think, particularly to women. It is significant that the best picture and analysis of the adolescent years of a girl has been written by a girl (the Journal of Marie Bashkirtseff), and the most reliable investigator in the Society for Psychological Research is said to be a woman—Mrs. H. Sidgwick.

Assuredly every field of University study should be open to women, there will always be students of exceptional talents and tastes to pursue them; but the average woman, trained in a natural way, will enter fields that harmonize with her temperament. Lest this should suggest to any one a temperament that dooms her to live on a lower plane than man, let me confess a faith of my own as a possible consolation, that growth does not cease necessarily with College years. When the body is healthy, and precocious development of intellect has been avoided, I see no reason to doubt that the intellectual powers of women may go on developing for many years longer. It is held that the characteristic features of woman more closely resemble those of children than do the characteristic features of man; and certainly, under favourable conditions, she seems to retain spontaneity and power of adaptation longer. The demand on the mother to adapt herself to the needs of her children as they grow to adult life carries with it the demand that her mind and soul should continue to grow in wisdom and to mature in experience. But that this freshness of power may be preserved through middle life, it is imperative that education in early life should not tend to lead her out of her orbit into an impasse. If we read biology and the history of the race aright, the perfection of woman cannot be the perfection of man: the two perfections differ too much in function to be comparable. A course of school education, therefore, based on the needs of boys, is radically unsuitable for girls from about twelve years of age upwards.

Scheme of Work for Members
OF THE
British Child-Study Association.

Session 1905-6.

(Drawn up by the Sub-Committee elected by the Council, 1905.)

As a result of the interest taken at the Derby Conference in the betterment of Infant Schools, it has been decided to ask each Branch of the B.C.S.A. to undertake enquiry into this subject as a matter of special interest during the ensuing year, and the following are suggested as topics suitable for the enquiry:—

I —Attendance of scholars under five-and-a-half years :

(*a*) What percentage of child population in your area under 3, 4 and 5 years is found at school ?

(*b*) Is it the opinion of teachers that this should be encouraged ? If not, what provision should be made for infants from humble homes whose parents cannot attend to them during the day ? If it is to be encouraged, do parents or teachers advise a separate institution in the nature of a *crèche* or nursery school ?

(*c*) Ought the law to forbid the oversight by public authority and refuse grants for a scholar under 3, 4 and 5 ?

II.—What is the curriculum of the Infant School in your district ?

(i.) Time per week devoted to the subjects:—Religious instruction, arithmetic, language work (including reading and writing), manual and other Kindergarten occupations, object lessons, drawing and colour work, etc.

Distinguish (*a*) ages 3 to 5 ; (*b*) 5 to 7.

(ii.) Length of the school day ?

(iii.) The experience of the teacher as to the value or otherwise of formal studies in the three Rs before five years of age ?

(iv.) Opportunity for free play and activity in both morning and afternoon ?

III.—*Oversight.* How far are Infant Schools controlled (*a*) by Heads of Elementary Schools. (*b*) By Local Authority Inspectors. (*c*) By H.M. Inspectors, so as to prevent or encourage the betterment of their work ? (Information to be confidential if so desired.)

IV.—Planning and equipment of room or buildings :—(*a*) Open-air playgrounds ; (*b*) class-rooms ; (*c*) apparatus, toys ; (*d*) garden space, window gardening, care of growing things, birds, plants ; (*e*) couches or cots for infants to sleep ?

V.—Proportion of scholars to teachers (size of classes), including employment of older girls as "monitors" to assist a teacher, or of otherwise unqualified teachers ?

VI.—Qualification of teachers, especially in the understanding of the physical needs of infants ? Is there difficulty in obtaining qualified teachers for infants ? Should infants' teachers be paid at similar, higher, or lower rates than teachers of older scholars ?

VII.—Oversight by Medical Officers of Health of the physical condition of infants.

VIII.—The effect of plan for the education of older scholars as determining aims and methods in the management of infants at school, *i.e.*, Is the Infant School to be conducted chiefly as a preparation for the pursuits of the Elementary School (especially in relation to II., iii. and iv. above)?

IX.—Home and School. Report on efforts made to secure the co-operation of parents and teachers in the case of infants. How far is more time and leisure required by teachers in order to secure this aim? Do teachers feel it to be essential?

X.—Children from more cultivated homes.

(i.) Report of syllabus and plan of education, based on scientific principles, adopted in families or in private schools.

(ii.) Special problems affecting the welfare of such children which do not apply to the large classes of public Infant Schools.

The Committee suggest that enquiries in the nature of Questionnaires be sent under some or all of these heads, as widely as possible, in areas where the Association has Branches or has members proposing to establish a Branch: that the co-operation both of Infants' Schools Headmistresses, of other Teachers' Associations, and of local education officials, be sought in order to secure—

(1) Accurate returns on matters of facts.
(2) Information, by means of questionnaires, as to the opinion both of teachers and parents, of medical men, and of others specially interested in the progress of education.

Some cost and a great deal of time will be involved in doing this work successfully, but the Council believe the subject is of urgent public importance, and that the time is ripe for making a careful investigation.

It is suggested that the Branches may, with some hope of success, appeal to friends of education to provide the funds necessary to pay for the printing, etc., involved in conducting such an enquiry. Branches are requested to send reports of the progress of the work, to be published in the *The Paidologist* during the year, so that a complete report may be laid before the Conference of 1906.

Secretaries are requested to send in answers to the above questions or to apply for further information, if necessary, to the General Secretary (Miss) Mary Louch, Colbury House, Totton, Hants.

Child-Study for Parents

What is Child-Study?

It is an enquiry into the nature of children, body and mind, so that we may understand them better, and give each child the best possible chance of becoming what it might become if not hindered by traditional and conventional curbs, and if all its best powers had a chance to grow.

The Child-Student becomes almost inevitably a Child-Gardener. Fröbel was a Child-Student, and so is every true Froebelian teacher. The Child-Student observes the human plant at every stage, tries to find out under what conditions he thrives best, at what stages such and such changes may be expected if neither forced nor hindered by outside influence, he carefully notes the differences in individual plants, and records the effect of such or such treatment on these individuals. Above all, he compares notes with other child-gardeners, learns from others, and takes trouble to pass on the results of his own observation and experience, so that those who come after may benefit by the accumulated knowledge of their predecessors, and, though dwarfs, may stand on giants' shoulders. It is a philanthropic effort to benefit the race by obtaining more intimate knowledge of it at the most impressionable and critical periods, and to do this effectively by using the methods employed in other scientific enquiries. But Science is *organised* knowledge, and a mass of knowledge gained by experience, *i.e.*, *empirical* knowledge, must be obtained before it can be organised. For this reason, ordinary people, so long as they have average ability, common sense, and sympathetic interest in children, can do much to help the men and women trained in scientific methods, who will undertake to direct observation, examine evidence, and organise knowledge.

Why is Child-Study Valuable to Parents?

Because we have studied nearly everything else more than we have studied the most important and the best loved things in the world—human children. Unthinking people will assert that Child-Study is unnecessary, because people got on very well without it in days gone by; or because having been a child oneself, one knows all about children; or because, having brought up a family of children, one cannot fail to know all that is needed.

The first objection, fully expressed, reads thus :—" I grew up under a certain system—why should you want to improve, on me ? Happy will my children be if they turn out as well as I have done!" A fact that parents often forget is that they have to prepare their children to take their part in life as it will be twenty or thirty years hence, not as it was twenty or thirty years ago.

Secondly: "I have been a child myself, therefore there is nothing to teach me." Has it ever been the fate of a reader to be left alone in sole charge of a very young baby? Would there have been anything convincing at that moment in the remark: "You were a baby just like that yourself once, so you must know all about it." No. When one was a child, or even a youth, one had not full-grown powers of comprehension, one could only form childish observations and judgments of one's own mental status (psychological problems, moreover, have no interest for children), and even these are mostly forgotten. One's childish memories are chiefly of events, people, and places; memories of subjective states are few, distorted and coloured by adult experience and reflection. Reminiscence is helpful, chiefly because it excites sympathetic interest, not because it furnishes reliable data.

Thirdly: "I have brought up children, therefore, of course, I know what children are, and what is best for them." This also suggests a fair amount of self-satisfaction. Supposing it to be true, what a pity it is that so much knowledge should be lost! This leakage is what the Child-Study Association would like to prevent. But is it quite true? Do the children thus brought up, on looking back at their education and home-life, feel that they were entirely understood and treated always in the best way, especially during early man and womanhood, a period on which Child-Study is already able to throw much light, and a period at which most educational systems have hitherto stopped short. What waste would most parents plead guilty to in bringing up a family,—waste of time in experimenting, and, worse still, waste of children's talents, characters, and lives!

It is sometimes said by people who first hear of Child-Study that it may make children morbidly self-conscious. Any work, however good its object, if badly carried out, might do harm. The child-student who excites self-consciousness in a child defeats his own ends, for then he finds nothing natural to observe in the child except self-consciousness. He is therefore scrupulously careful to avoid this. This objection is sometimes brought forward by people who do not hesitate to arouse self-consciousness in children by repeating children's sayings and doings before the little prodigies themselves. I have known a child invite his mother to relate to some chance visitor "What I said yesterday"; or, in the attempt to foster good manners and morals, a parent or nurse will say: "What will people think of you if you do or say so-and-so?" A considerable amount of morbid self-consciousness is aroused in children by unnecessary remarks on their appearance and new clothes.

Another very plausible objection sometimes takes this form: "I love my children too much to study them." To understand how foolish this is, substitute anything else for the word "children." "I love music, pictures, flowers, nature, poetry, too much to study them." How indignant would such an one be if told by an outsider that he or she had not studied a beloved child sufficiently to know his thoughts or feelings. "Indeed, I know the child intimately," would probably be the rejoinder; "he has been my study from birth." This knowledge born of intense love would be very helpful to others, and might save some less loved child-soul.

Or another may say: "Material things can be studied by scientific methods, but mind is too subtle, too spiritual, to be observed." This, too, is not true. The mind of man was studied before the days of David the Singer, or Plato the Philosopher, but hitherto the mature mind of the adult has been considered more worthy of study; now we plead for as accurate an enquiry as may be into the developing mind of the child.

How does the Child-Study Association differ from other Educational Societies?

Chiefly in this, that it forms its theories not on surmises of what the child *should* be, but on as definite a knowledge as it is possible to procure of what a child *is*.

Any persons wishing to join a Branch of the British Child-Study Association or to form a new Branch are requested to write to the General Secretary—(Miss) Mary Louch, Colbury House, Totton, Hants.

Correspondence.

To the Secretaries and Members of the British Child-Study Association.

Dear Friends,

The pages of our Magazine offer an opportunity for us to inter-correspond which has hitherto been somewhat neglected. If we were assured that every Member in each Branch received the Magazine (as we hope will be the case in the near future), much expense in the way of local printing, postage, and clerical work might be saved, especially if it should please the Editors, in making their new arrangements, to bring out a number early in September, when the respective programmes of the Branches might be published. If extra copies of these programmes were required, the printer of the Magazine would doubtless furnish them at a comparatively low price.

Also, anyone might thus get advice or suggestion with regard to lecturers, books, or methods of procedure, from a large body of experts and specially educated people.

You will see in the account of our Conference at Derby that a scheme of work for the whole Association has been drawn up. I have been asked to receive papers of answers to the printed questions, and to forward them as they accumulate to the special Committee appointed to examine and classify these results. Therefore please send in the papers of answers to me at the address given below. (Kindly put my Christian name on the cover.)

We are anxious to push on the work of forming new Branches. Several places have been suggested as suitable: Nottingham, Exeter, Bristol, Bradford, Cardiff, Bedford, Newcastle, among others. Will Members help this work by sending to me the names and addresses of people living in or near these or other towns who would be likely to be interested in Child-Study and to take active part in the formation of a new Branch?

The Sub-Committee appointed to extend the work of the Association is bringing out a series of short pamphlets, price one penny, which will be suitable for circulating in a neighbourhood where a new Branch is contemplated.

I am, yours truly,
MARY LOUCH (*Hon. Gen. Sec.*).

Colbury House, Totton, Hants.
June 10th, 1905.

The Library.

The Infant School—Its Principles and Methods. By J. Gunn M.A., D.Sc. 387 pages. Thos. Nelson and Sons.

This is an altogether admirable book for students in training colleges or other young teachers. In his preface, the author states " that in the Infant School the central fact for the teacher is not the curriculum, but the pupil," and hence he proposes to discuss education from " the central standpoint, the child to be educated." This purpose is discernible through the whole book, especially in the sections entitled Child-Study, The Pupil, Physical Training and Moral Training. The instincts and native interests of the child, methods of Child-Study, such physical problems as growth, fatigue, nervousness, are all discussed, while Dr. Gunn insists that all investigations in child psychology and their educational application shall be based on a consideration of the child, not as a finished product, but as a continuously-developing organism. He says : " The physiology of growth is what we need to know in school, and the application of the laws of health to children of various ages. . . . Genetic psychology, or the laws of mind growth, must be added. . . It is not the virtues and vices of adult life, but the evolution of morality out of the impulsive life of the child, which affords the teacher her problems."

The book contrasts in standpoint, topics discussed, and method of treatment, with the ancient text-book of School Management formerly used by young teachers, and the whole testifies to a different and a more desirable ideal in our present day education of young children than was current thirty or forty years ago. S. Y.

The Principles of Education. By T. Raymont, M.A. Price 4/6. 381 pages.

The ordinary manual of education consists of a modicum of psychology, followed by chapters on " Method," and the latter end of the treatise, like Gonzalo's commonwealth, forgetteth the beginning, for the method obviously owes more to empiricism and tradition than to the scientific considerations which by courtesy precede them. Professor Raymont clears the way by stating frankly in his preface that in his opinion the dependence of Education upon psychology has been vastly over-rated. Education is in debt to psychology, as to other sciences, but it must vindicate its claim to an independent position. It is not that Professor Raymont casts in his lot with the empiricists, for his chapters are informed throughout by a truly philosophical spirit But this philosophy is not that of the schools : it is rather that which lies behind all the highest and best forms of a common sense applied to large affairs. Although we miss the usual generalisations as to functions of mind, and how to train them, we feel throughout that we are under the guidance of one who knows mind, and who knows how it affects life. The positions laid down are those of an understanding which is both massive in knowledge and subtle in realising the connections of its own department of knowledge with other regions of intellectual activity.

The topics discussed are many : the State machinery of Education, the study of children, the scope, order, and correlation of studies, maxims of methodical procedure, analyses of the processes involved in the giving of lessons, the various teaching devices, etc. The author throughout regards Education as having for its all-inclusive aim the formation of character, and we find an important section on the disciplinary part of the teacher's work, which is so closely bound up with the instructional. The style is much above that which is generally found in manuals of this kind. The cultivated reader who cares for education as a problem of citizenship, as well as the professional educator, will find much wisdom on this all-important topic of the replacement of human energy in the future, expressed in clear, dignified language, and illuminated by vivid side-lights of illustration, derived from an acquaintance not only with schools, but with letters and with men. We may not all agree with his dictum as to the position of psychology in our educational studies, but Professor Raymont's manual should in any case form a part of the equipment of the future teacher. M. M. P.

Child-Music. By WILLIAM PLATT. 37 pages. Price, 2/6. Simpkin, Marshall, and Co.

For some years we have been familiar with the systematic study of children's ideas, as expressed in drawing, or in spoken or written words. Mr. Platt suggests a new field for study in his little book, "Child-Music." Here he has recorded some of the snatches of song with which his two small sons accompanied the expression of their emotions, experiences, or desires.

Everyone who has had any close companionship with little children must have noticed how naturally they tend to sing or chant their utterances, the joy in repetition, which Mr. Platt designates "Handelian," being specially characteristic of their efforts.

The two children whose songs are recorded here show more than ordinary musical intuition, as evidenced, for example, in the accomplishment of the Minor third with which the very first example ends, the tunefulness of Example 5, and still more by the singing in canon, interesting examples of which are given later in the book.

But it may be questioned whether Mr. Platt has not attributed more to intention, or, at least, self-conscious effort, than is quite justifiable. May not, for instance, the avoidance of the strong accent in "A Dream of Christmas Joys" be due merely to the disjointedness resultant on the immediate expression of the ideas as they occurred? The chanting of the words to the same, or nearly the same, notes is a common method with children, and it would be unusual for such phrases to start with a strongly-accented note.

The usefulness of elaborating these snatches into accompanied songs or piano solos is not quite apparent.

However this may be, the study is full of interest; and the contention with which the writer starts, that music is alone among the arts in coming fully within a young child's power of enjoyment and expression, in so far as it makes any appeal to him at all, is undoubtedly justified. M. D.

Kinderzeichnungen. Vis zum 14, Lebensjahr. Mit Parallelen aus der Urgeschichte, Kulturgeschichte und Völkerkunde. Dazu 169 Figuren auf 85, Tafeln und 18 Tabellen in Text. Von Dr. Phil. Siegfried Levinstein.

The chief object of this work seems to be to connect the scattered studies on different aspects of Children's Drawings, and to make them available for the work of the various Art Societies and Teaching bodies, which (especially in Germany) are beginning to publish much valuable discussion on the place of art-work in the education of children, and the reforms which are necessary in the teaching of drawing and kindred objects. The author tells us in his preface that he is anxious to enforce the parallelism of the development of the individual and the race, as shown in the drawings of children up to the age of fourteen, and in those of primitive and ancient peoples. He advocates a line of comparative research which will, he feels, throw much light on educational problems of all kinds. His work is arranged under the following suggestive heads:—(1) The Human Figure; (2) Animals and Plants; (3) Perspective and Colour; (4) Stories; (5) Drawing as a Language; (6) The History of Culture, with ethnological parallels; (7) Drawings of Eskimo Children; (8) Pedagogical Consequences.

These chapters deal fully with the numerous plates at the end of the book, which are a striking feature of the work. Many are old friends, but some are quite new, and the reproduction of coloured drawings marks, we believe, a fresh stage in the development of "Studies on Children's Drawings."

Besides the general text, there is a list of the illustrations, giving the sources from which they have been taken, and, in some instances, the size of the original, and a copious bibliography. The whole work is calculated to be both interesting and stimulating to future students of this fascinating subject. It throws, perhaps unconsciously, a warning light on its vastness and complexity, and shows that there is still a great deal of work to be done, by humble students, on its single aspects. Dr. Levinstein's personal contributions of observation and critical consideration are difficult to disentangle from the mass of material that he has laid before us: these must be considerable, but perhaps he means the chief value of his work to consist in the almost bewildering society of the "great company of preachers" amongst whom his industry has placed us. Comprehensive as his work is, it seems, by the notice in the Appendix, to be intended to be only the forerunner of a much large: scheme which is to be carried out in Germany. To the results of this we look forward with an admiration that borders on dismay. We are promised an English translation of Dr. Levinstein's book, which will be very acceptable to the Members of the B.C.S.A. There are a few points which Dr. Levinstein will, no doubt, take the opportunity to revise, with the assistance of the originator of some of his material, before the appearanceof that edition.

S. P.

The Pedagogical Seminary. Vol. XII., No. I.

The most important article of this number, by Miss Theodate Smith, gives the results of an investigation in Obstinacy and Obedience, a study in the Psychology and Pedagogy of the Will. A large number of returns, based on reminiscence and observation, collected by the Questionnaire method, formed the data for the enquiry. The problem of obstinacy is an especially difficult one to the teacher of a large class of young children in school, who are the product of all conceivable differences in heredity, social environment, and home training, and there is much in this article that will be of interest and use to teachers.

From the material illustrated in the article, it seems that obstinacy is an extremely complex mental condition, marked by physical reactions of the most varying type, and with mental symptoms of still more varied and complex character than the bodily. In accordance with so much of the philosophy of the present day, many cases of obstinacy are traced to a physical origin, and mal-nutrition, digestive trouble, and anæmia, are all elements in its cause. The one invariable physical symptom appears to be a deficiency of muscular control, and it is insisted that obstinacy, contrary to popular opinion, should be regarded as indicating weakness or paralysis of the will rather than excess of will. Some of the most interesting cases quoted in the article give evidence of a strong instinctive element, powerful enough to withstand all opposition and punishment. Institutional obstinacy, *i.e.*, the perversity of will noticeable frequently in large residential communities of children or adults, the obstinacy of old age and animal obstinacy, are all included in the investigation.

However complex the cause, and however varying the symptoms, there is general agreement among those furnishing the returns that the most successful method of dealing with child-obstinacy is to leave the child alone, since this diminishes the characteristic physical and mental tension, and brute force tends to increase rather than decrease the cramp of will, With regard to obedience, the reminiscent returns, while representing a very great diversity of training, are unanimous in testifying to the value of early training in obedience. If obstinacy is to be considered as an inhibition due to the weakness of an untrained will, then the training in obedience, if it leads to the development of self-control and strengthening of the will, will tend towards the overcoming of obstinacy.

Another article, entitled " Elementary Education in England," summarizes the legislative history of the nineteenth century to the present time in regard to primary education, with a special discussion of the Act of 1902. It is somewhat new, however, to hear that the method employed most commonly in the elementary schools of England is that of recitation of lessons prepared from a text-book. We should have said that oral instruction is the staple method in these schools of presenting knowledge to the pupil.

An article by Michael F. Guyer, on " Method in Nature-Study," will commend itself because of the stress laid on the importance of method in the subject, as against the hitherto paramount claims of material. The writer discusses the study of animals and plants, and emphasizes the fact that their whole business is care of themselves and offspring. He appends a series of well-framed and admirably arranged questions, by which the observation of even the youngest pupils could be guided to the explanation of the problems proposed to them.

A Summary of the work done in Child-Study in Clark University, a bibliography of Child-Study in Poland, articles entitled "Latin in the High School," and "Preparing Manuscript for the Press," are the remaining contents of this number.

S. Y.

Longman's British Empire Readers.

The Set consists of an Introductory Reader and six other graduated Readers. The whole Set is exceedingly-well got up, with beautiful illustrations, good paper and printing and letterpress, which is calculated to inspire the little readers with an interest in reading, as well as facility.

S. Y.

Les Archives de Psychologie. February—March, 1905. Price 6 francs. London: Williams and Norgate.

Three articles in this issue are of more than usual interest to the student of child life. The second is one of eight pages, on "The Child's Fear of the Night," by M. Senet. The writer holds that this has its origin in a general feeling of depression, from which spring certain feelings of alarm, attached to definite objects, vague at first in their general import, but becoming more definite with growing sensory excitation, which often rises to an abnormal pitch. This feeling of depression, to which the author ascribes the primary cause of fear of the dark, may be compared with the pleasure which Preyer and other observers have noted children to find at a very early age in the sight of bright things. The stimulative effect of light is utilised at our dinners, balls, and in our brightly-lit shops. Groos, in the "Play of Man," has noted the love of primitive peoples as well as of children for bright objects. Hence it seems feasible that the absence of brightness should have a depressing effect, and that this should in itself afford the basis for dread of darkness. But depression is not fear—the latter grows from the former, and is a product of judgment and of imagination. Hence very young children show no fear of the dark, though preferring light. Experience begets fear, and the experience is often provided by the foolish tales of elders. In the opinion of M. Senet, the fears that arise are in most cases "a deviation of the instinct of preservation of the individual or of the species." Fear is an exaggeration, more or less accentuated, of the defensive instinct.

Another article, by Mlle. Dégallier, a teacher at a Missionary School at Talagouga, on the French Congo, gives some "Notes on the Pahouin Negroes." Child-Study makes use of anthropology—these observations are available in both fields. One peculiarity the writer noted in these negro children was the facility with which they could read their printed matter upside down, as easily, indeed, as in the normal position. One girl would always hold her book inverted when alone. This, however, was not so noticeable with those who learnt to read when quite young.

In writing, also, there was noticed with beginners a constant tendency to begin at the right-hand corner of the bottom of the slate, and to invert their letters; but the writer believes that the more intelligent the children were, the greater was their tendency to write and read in the normal manner. Another characteristic of the writing was its lack of individuality and close imitation of the copy set, as also the comparative ease with which the teacher's style was acquired. In drawing, also, the beginners instinctively copy the model inverted. Some specimens of original drawings are given. The fowl, child, and man agree in having no resemblance to the objects pourtrayed, as also in each having five large toes and fingers.

These negro children had keen sight, and were remarkably observant, but of colours they only appear to distinguish light and dark. Some further observations on this point might help to throw further light on the Young-Helmholtz theory of the three primary colours—red, green, and violet. Mlle. Dégallier considers the memory of her charges excellent, and to be developed at the expense of the other powers of the mind, the visual memory being particularly strong, whilst the memory for songs and melodies was also good. Some characteristic games are noted, and their ideas of right and wrong, and their heart qualities are considered,—altogether a most interesting contribution.

But the great feature of this issue is an "Outline of a Biological Theory of Sleep," by M. Ed. Claparède, whose name is in itself sufficient guarantee of thoroughness of treatment. Running into over one hundred pages, as this article does, one can only here summarize its conclusions. The main thesis is that sleep is a positive function, and not merely the result of the exhaustion of the organism, that normal sleep precedes exhaustion, and that where this is not the case insomnia results. Sleep is indeed an instinct of defence, biologically connected with the function of defensive inhibition, the power of simulating death possessed by many animals, which by preventing the organism from wearing out, fits the animal better for the struggle for life. M. Claparède makes great claims for his theory: the breadth of the field he has covered in his investigation, and the care with which he has surveyed it, should go far to justify his claim.

T. G. T.

Educational Review. December, 1904—April, 1905. 1/8 per part. 108 pages. American School and College Text-Book Agency.

The great value to English readers of this Review—to which we in Britain have no counterpart—lies in the varied aspects one gets of phases of educational activity in another environment. And if this environment determines very largely the results of the principles applied and the methods adopted, yet provided we make such modifications as different circumstances call for, and look for correspondingly different results, much of value will arise from a consideration of both the principles acted upon and the ways of using them.

Very largely are the numbers under consideration concerned with the St. Louis Exhibition—from general description of its educational exhibits (December, 1904) to publication of many interesting papers read before its educational section. These, and other articles, cover a wide field. The political aspect of this comes out in one on "The Movement for School Reform in Boston" (December, 1904), the religious aspect in such papers as "The Teaching of Theology" (January), "Catholic Education in the United States" (February), and "The Annual Survey of Moral and Religious Progress" (April). The academic aspect receives treatment in "Present Problems of the University" (December, 1904), some part, at least, of which is applicable to English conditions. In the same issue is to be found an "oration" by President Butler, giving an interesting, if glowing, epitome of the one hundred and fifty years' life of Columbia University (1754—1904). Both the December and January issues contain papers on the functions of the College; and in February there appeared an article on the "Course of Studies at Princeton University;" whilst in April another paper dealt similarly with Columbia. But, perhaps, none of the papers excel in interest those dealing in various ways with the social aspect of education. One of the most notable of these (April) hails from England, being an abstract of the eloquent address Professor Sadler gave in London before the Sociological Society. Those who, like the reviewer, heard that address can only regret that the abstract is so short. Professor Sadler holds that the breaking down of the two antagonistic ideals of, on the one hand, the moral efficiency of instruction as exemplified mainly in the elementary schools, and, on the other, of the moral and intellectual efficiency of tradition and indirect civilising forces, as mainly exemplified in our public schools, has prepared the way for unprecedented unity of action in English educational affairs; and he believes that whilst we are realising, on the one hand, the need for better physical conditions in homes and school buildings, with better equipment and teaching, we are, on the other, beginning to lay more stress upon the social and corporate influences of education. With this view, thus inadequately stated, may be compared the closing words of an article by Superintendent Draper on "Education Legislation in the United States in 1904 (April)": "There is clearly a universal movement in the country towards a comprehensive educational system which shall recognise every condition in life, every form of intellectual activity, every phase of labour depending upon skill, which shall assure everyone his fair chance, and which shall perceive that the true greatness of the nation depends upon public policies which make all that can be made, industrially, intellectually, and so morally, of every individual unit." Somewhat allied, though emphasizing more the moral and religious aspect, is the paper for which Dr. W. T. Harris takes as his thesis that "Social Culture is the training of the individual for social institutions" (January). The name of the author is sufficient guarantee of suggestiveness, broad outlook, and philosophic basis. This article demands consideration. Its general trend may be indicated from one of its concluding sentences—"that social culture in the form of the Church and the School as independent institutions becomes possible only on the basis of the religious world-view of Christianity."

Among other articles worth reading are another review of Dr. Stanley Hall's great work (April), with some refreshing criticisms, a historical address by John Morley, "Some Thoughts on Progress" (January), and a suggestive and all-too-meagre report of a Lecture by President Butler, on "The University and Modern Life" (April).

But from our point of view, the one article surpassing all others in interest is that by Professor E. E. Brown, on "Present Problems in the Theory of Education" (January). This is an article to be thought over by all interested in educational development: a few suggestions from it only can be given here. "Education is an art which addresses itself to the attainment of social ideals, subject to conditions discovered by natural science." "It must continue to offer free play to the creative spirit of teaching, without which teaching art cannot be true art." But "no educational theory can be fully scientific till it has been made to take its place in the ordered system of philosophy." Problems such as "the relation of guidance to spontaneity in the methods of instruction" and the "educational significance of modern democracy" are briefly considered; psychological problems are then touched upon, these under three heads: (1) The determination of the successive stages of normal human development; (2) The relation of the generic to the specific in mental development; (3) The relation of motor tendencies to general culture and to the processes of development, particularly under the forms of imitation and suggestion. Under this last head, Professor Brown raises the following queries: "To what extent is the real and permanent result of studies and method in the mind of many a learner obscured by the very fact that as an imitator he seems to share in the good that his fellows get from them? Can we not in the spirit of our finer scientific and ethical realism separate the actual from that which arises through conscious or unconscious mimicry? Yet it is to be remembered that pupils in schools not only live under a constant play of suggestion-influences, but are preparing for a life which is to be lived under similar influences. Such influences are to be reckoned with accordingly as a constant factor in human life, but incalculably variable in kind, direction, and amount. These facts call for further psychological study, in order that we may know more accurately how they enter into the problem of school training, and particularly what bearing they have on the momentous transition which the learner sooner or later must make from the little life and much training of the school to the larger life and more diffused culture of the great world beyond the school."

The article concludes with a careful consideration of the place in education of prescribed and elective studies, and the relative importance of each at different ages.

T. G. T.

Zeitschrift fuer Paedagogische Psychologie, Pathologie und Hygiene. Edited by KEMSIES AND HIRSCHLAFF. 1904-Parts I. and II.

Besides the papers mentioned below, these two numbers contain reports on the Meetings of the Berlin Psychological Society and the Berlin Society for Feeble-Minded Children. The bibliography (*bibliotheca pædo-psychologica*) of books and papers published in 1901 now numbers 1,263 items. The remainder of these two numbers is devoted to notices and reviews.

" The School and Society." John Dewey. The first of these Lectures was published in Part IV. of 1903. The second and third now follow. They are admirably translated, not by Professor Ludwig Gurlitt, as we were previously informed, but by his daughter, Miss Elizabeth Gurlitt.

" New American Work in Child-Study." — Victor Lowinsky. This article is a clever review of the work done in the United States. As the ideas of Stanley Hall, Earl Barnes, and others are well known in England, we abstain from quoting from this paper. In Germany, however, it will create great interest, as people there know little, or have very vague ideas, about the Child-Study work done in America and England.

" The Most Favourable Conditions for Figure-Perception." By Hermann Walsemann. The author first explains the difference between realistic and idealistic perception. The realist says perceptions are inward pictures of outward objects. The idealist says the outward objects are the perceptions. The author goes with Pestalozzi and Schopenhauer, and says perceptions are idealistic. He continues by showing that figures are always perceptions. Therefore figures must always be objects in front of the mind's eye. Admitting this, primary instruction in arithmetic needs some apparatus to show the children. The author reviews the various systems in vogue, taking as a base the experiments he has made with many thousands of children, with many different kinds of " reckoning machines." His experiments absolutely prove the " one row of beads system " to be bad. The best results were obtained by two and three rows, each containing beads of two colours. But these rows of beads confuse the children, as they see all the time not only the beads they are to operate with, but also those out of play. He has constructed an apparatus by which only such white or red spots are seen as the child is expected to operate with. The remainder of the paper is an explanation how to work the machine. This machine can be worked by the teacher without turning his back to the class whilst operating, which seems a great advantage to us.

" Bodily Development during School age." By Leopold Treitel. Though very short, this paper is concise, and full of important matter. The chief results of the writer's observations and measurements are : mentally backward children are generally physically feebler than the average ; children of the middle and upper classes of society are, on an average, five to six centimetres taller, and three to five kilogrammes heavier, than children of humbler parentage. The chest-width, however, is about the same. Up to eleven years, boys and girls develop on the same line. Girls develop chiefly from eleven to fourteen, boys after fifteen. The taller stature of children living in comfortable surroundings is partly due to heredity. Daily measurements show that from December to March is the period of least growth. From April to July or August, growth in height chiefly takes place, and from September to November weight chiefly increases. The first year of life seems to be subject to no particular rules. Not only during a single year, but throughout the years of growth, does the rule hold good : first, height ; then weight. Children from poor homes develop more slowly than children from comfortable homes before puberty. But during the period of sexual development this difference disappears rapidly. In America, the differences between children of rich and poor are almost *nil*. They are greatest in England and Italy. The author has, however, observed that if children of poorer homes are obliged to work hard at home, in mills, or otherwise, after eleven years of age, and before full growth, their physique materially suffers. S. L.

BOOKS AND PAMPHLETS RECEIVED.

The Principles of Education, by T. Raymont, M.A. Longmans and Co.
Kinderzeichmungen, by Dr. S. Levinstein.
Child Music, by W. Platt. Simpkins, Marshall and Co.
British Empire Readers. Longmans and Co.

MAGAZINES RECEIVED.

Zeitschrit für Padagogische Psychologie, Pathologie und Hygiene. Walther, Berlin.
Archives de Psychologie. Geneva—London : Williams and Norgate.
Parents' Review. Kegan, Paul and Co. 6d. monthly.
Child Life. George Philip and Son 1/- per quarter.
Educational Review. *Educational Review* Publishing Co., New York. 16/6 yearly.
Vaktijdo-chrift voor Onderwijzers. Amsterdam.
Teachers' Institute Magazine. Kellogg and Co., New York.
School Review. Chicago. 20 cents monthly.
L'Education Familiale Review de la Ligue Nationale, Bruxelles.
La Gymnastique Scolarie, Bruxelles.
L'Etude. Philadelphia. 15 cents monthly.
Indian Journal of Education. Madras. 10 annas a month.
Japanese Magazine of Child-Study. Tokyo, Japan.

The Conference and the Branches.

"It is considered the duty of any Branch wishing to amalgamate with other local Societies to first of all notify the same to the General Secretary, and not to take any decisive step until the Council has met and discussed the matter, and that this Council considers that this principle arises from the rule regarding constituent Societies."—*Copy of resolution passed May, 1902, at Liverpool, and to be added to the rules next year.*

At the recent Council Meeting (May, 1905) the Chairman wished it to be stated, as the opinion of the present Council, that everything possible should be done to re-establish individual independence which may have been lost.

Mary Louch, Hon. Gen. Secretary.

On all hands one hears very encouraging reports as to the success of the Eighth Annual Conference, of which the distinguishing features appear to have been the vigorous character of the discussions that took place and the many fruitful suggestions made. Of these the most notable was the proposal that "The Betterment of Infant Schools" be taken as a general subject for consideration by the Branches during next Session. Another matter of critical importance had reference to the Magazine. Members are urged to carefully consider the valuable report of the Council Meeting which Miss Louch has provided, in conjunction with her report as Hon. Gen. Secretary, and the reports of the Magazine and Editorial Committees.

And may it be suggested that, although printed in smaller type, all these, together with the Branch Reports, are worthy of careful attention on the part of Members—especially, perhaps, should one note the report of the Manchester Branch, with its striking "suggestions relating to conditions of work in Infants' Schools," and that of the West Kent Branch, which in the story of its creation provides some suggestions for the formation of other new Branches. And this, again, is another of the important matters touched upon at Conference, for the promotion of which a sub-committee was formed. Should any Member or any Branch have any suggestions to make on this subject, or find themselves in any way able to assist in the founding of new Branches, they are urged to write to the Hon. Gen. Secretary, who will be pleased to consider their suggestions or receive their help. T. G. T.

British Child-Study Association Conference 1905.

THE COUNCIL.

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THE EIGHTH ANNUAL CONFERENCE,

Derby, May 11th, 12th and 13th, 1905.

Thursday, May 11th, 8 p.m., at the Technical College.—Reception of Delegates and Members by the Reception Committee. Presidential Address by Professor Muirhead on "Scope and Object of Child-Study."

Friday, May 12th, 10 a.m., at the Royal Institute for the Deaf.—Council Meeting. Chairman: H. Holman, Esq., H.M.I. 3 p.m., At High School, Osmaston Road.—General Business Meeting. Chairman: The Hon. Sir John Cockburn, K.C.M.G., President of the London Branch. Agenda:—General Secretary's Report and Balance Sheet; Proposals by the Council; Branch Secretaries' Reports; Suggestions for the future work of the B.C.S.A.; Discussion of a Scheme for the "Betterment of Infants in Elementary Schools, etc. 8 p.m., At the Technical College.—Lecture by Professor Earl Barnes on "Some ways in which Child-Study can give Help and Guidance to Parents." Chairman: H. Arnold Bemrose, Esq.

Saturday, May 13th, 10 a.m., at the Technical College.—Lecture by H. Holman, Esq., H.M.I., on "Some ways in which Child-Study can give Help and Guidance to Teachers." Chairman: The Rev. Canon Hacking, M.A., Vicar of Chesterfield.

THE COUNCIL MEETING.

Mr. Holman took the Chair at 10 a.m. The Delegates who constituted the Council were:—Miss Byett and Miss Dawes, from Birmingham; Miss Roberts, from Cheltenham; Miss Tuke, from Derby; Miss Hardy and Miss Horne, from Edinburgh; Professor

Findlay, from Manchester; Miss Hale, from Liverpool; Miss Stevens and Sir J. Cockburn, from London; Miss F. M. Watt, from West Kent; *ex-officio*—Professor Muirhead, President of the B.C.S.A.; Dr. Fletcher Beach, Editor of the *Paidologist*; Miss Mary Louch, Hon. Gen. Secretary.

After the Minutes of the last Council Meeting had been read and accepted, the application for affiliation from the West Kent Child-Study Society was brought forward, and granted.

The General Secretary then read her Report.

The Balance Sheet was next presented by the Gen. Secretary and Treasurer. The year began with £9 9s. 8d. in hand, and ended with £6 18s. 8d. The decrease was attributed to increased printing expenses, the payment of some arrears of Conference expenses of 1904, and to the payment of the Gen. Secretary's travelling expenses to Derby.

Discussion arose with regard to Capitation Fees—(1st) Because the Liverpool Capitation Fee had not been paid in full, "owing to the absence of the Teachers' Guild Secretary." Miss Hale explained that some years previously an arrangement had been made between the Liverpool Branch of the Teachers' Guild and the Liverpool Branch of the B.C.S.A., whereby Members of the latter had also to belong to the former. The Chairman deprecated such alliances. The Gen. Secretary quoted the Resolution passed at Liverpool in 1902:—"That it should be considered the duty of any Branch wishing to amalgamate with another local Society to first of all notify the same to the Gen. Secretary, and not to take any decisive step until the Council had met and discussed the matter." Miss Hale stated that the above arrangement had been made before the Council passed this Resolution.

It was then agreed—"That a copy of the Resolution be sent to each Branch Secretary, and that the Branches be asked to submit any desire to amalgamate to the Council before carrying it into effect." The Chairman also wished it to be stated, as the opinion of the Council, that everything possible should be done to re-establish lost independence. It was also decided that this Resolution should be printed in the *Paidologist.*

(2) Some Delegates said their Branches had important Honorary Members who paid no subscription, and for whom no Capitation Fees were paid. The Chairman ruled that a Branch should pay Capitation Fees for the privilege of having such Members.

A Report on *The Paidologist*, from the Editorial Commission, another from the Magazine Committee, and *The Paidologist* Balance Sheet, were read, together with a letter from the Treasurer to the Magazine (Mr. Rohde). It was stated that there was a deficit of £14 6s. 3d. for the year ending December, 1903, and of £16 0s. 8d. for the year ending December, 1904, thus making a debt to the publishers of £30 6s. 11d.

The Gen. Secretary pointed out that there would, doubtless, be a similar deficit for the year 1905, so that about £45 would be needed to pay off the debt. The proposal was then made "That the Branches be asked to make a serious effort to raise the Branch subscription to include the cost of the Magazine." To this it was objected that efforts had been advised more than once without effecting the end desired, and that some more certain way of preventing a deficit in future years was necessary. It was shown that some Branches supported the Magazine more substantially than others; and after various views had been expressed, it was resolved, and carried by nine to three votes: "That each Branch shall be responsible for a *pro rata* share of the expenses of the Magazine."

With regard to the deficit already existing, it was suggested that the debt be met by raising the Capitation Fee for such a period of years as would be necessary to repay a loan raised at once for the payment of the publisher, the extra capitation fee being ear-marked for that purpose. A Member of the Council objected to hampering the Association for several years in that way. The proposal was then made to meet the debt entirely by voluntary contribution. This was lost, but the Resolution "That the Capitation Fee be raised for next year by one penny, and that efforts be also made to cancel the debt by voluntary subscription," was carried by seven to two votes.

The Magazine Committee was abolished as a separate Committee, and its powers were transferred to the Editorial Commission (Dr. Fletcher Beach, Mr. Tibbey, Miss Young, and the Rev. J. O. Bevan).

The Gen. Secretary stated that no report had been received from the Librarian; she read a letter, dated July, 1904, showing that the Librarian had taken steps to organize the Child-Study Library. A Sub-Committee, consisting of Miss K. Stevens, Dr. Fletcher Beach, and Mr. Tibbey, was appointed to inspect the Library belonging to the B.C.S.A. in the School of Economics.

It was next proposed, and carried unanimously: "That the Conference be asked to suggest to all Branches some particular aspect of Child-Study to be considered during next year, and to be presented at the Conference of 1906." The Chairman proposed as a subject that which was to be brought forward at the afternoon meeting, viz., "The Betterment of Infant Schools," and the Resolution was carried "That the recommendation to the Branches be that they take up and collect information with regard to the subject of the betterment and working of Infant Schools, and the general education of children under seven years of age, and to present results at the next Conference." It was further ruled that competent people be asked to draw up a syllabus, of which a copy should be sent to each Branch Secretary, and that the results of the work prescribed in the Syllabus should come before a Committee specially elected for the purpose before being presented at the Conference. The following were elected:—Prof. Earl Barnes, Dr. Fletcher Beach, Miss Byett, Sir John Cockburn, Prof. Findlay, Miss Hale, and Prof. Hughes.

The matter of amalgamation or co-operation with the "Childhood Society" was next introduced, and the following letter from the Secretary of the Childhood Association was read:—

"October 18th, 1904.

"*To the Secretary of the British Child-Study Association.*

> "Dear Sir,—The Council have had before them a suggestion for the amalgamation of the Childhood Society and the B.C.S.A., and I am desired to ask if your Committee would be prepared to consider the question. Should your Committee entertain the suggestion, the Council of the Childhood Society would be glad to appoint a Committee of the B.C.S.A. to jointly consider the question.—Yours faithfully
>
> W. J. DURRIE MULFORD (*Hon. Sec.*).

Dr. Fletcher Beach related that as this letter had been sent to the London Branch in October, and the matter could not well be entirely delayed till the Council Meeting in May, a joint Committee had been formed in London, consisting of three Members of the Childhood Society, three Members of the B.C.S.A., and three persons belonging to both Societies. This Committee had organised a series of joint Lectures, which had proved very successful. A Sub-Committee was then elected, empowered to act in this matter, consisting of the following:—*The President of the B.C.S.A. for 1905-1906 (to be elected by the Cheltenham Branch), The General Secretary, †The President of the London Branch, The Secretary of the London Branch, Dr. Fletcher Beach (convener of this Committee), Dr. Langdon-Down, Dr. Hamilton Hall, Miss Findlay, and Mr. Tibbey.

It was agreed that any amalgamation scheme proposed by the above Committee should be submitted to all the Branches, and voted upon at a General Meeting of the Branch, and also that if the constitution of the B.C.S.A. should be added to or interfered with, an Extraordinary or Special Council Meeting should be summoned for consultation in London.

The next subject discussed was the extension of the B.C.S.A. It was decided that Miss K. Stevens, Mr. Tibbey, and Miss M. Louch be appointed a Sub-Committee, with power to act in this matter, and that a grant, not exceeding £5, be made from the central fund for propaganda work.

A grant of £2 to the Branch which entertains the Delegates at the Annual Conference was then sanctioned; and in connection with this matter, Miss Roberts, as the representative of the Cheltenham Branch, invited the Council to hold its next Conference at Cheltenham. The invitation was gladly accepted.

With regard to the Capitation Fee, it was raised to threepence for the year 1905-6, of which one-third was to be devoted to paying off a small part of the debt on *The Paidologist*, and "on or before February 28th of each current year" was fixed as the date when the fee should be paid to the Gen. Secretary and Treasurer.

The Secretary reported that an invitation had been sent to the B.C.S.A. by the authorities at Liège, to send a Delegate to the International Conference at Liège, in September next. The Delegate was invited to read a Report. It soon transpired that Dr. Fletcher Beach would be attending this Conference to represent another Society, and he was therefore chosen to represent the B.C.S.A. as well.

The Council Meeting ended with the re-election of the existing Officers *en bloc* for the year 1905-1906 (with the exception of the General President, who is annually nominated by the Branch which entertains the Conference Delegates) and the passing of votes of thanks to all the General Officers of the Association, and to the Officers and Committee, and hosts, hostesses, and other benefactors, of Derby.

GENERAL SECRETARY'S REPORT, 1904-1905.

The record of the past year is an encouraging record of eventfulness. The Association, now in its eleventh year, shows signs of being more alive than it has ever been, and I venture to think it still has unexploited possibilities for the development of which the psychological moment seems very near. The imminence of this psychological moment makes us regret the more that Mr. Hudson, our suggestive and enterprising General Secretary, should have found it necessary, in the Autumn of last year, to resign his office (though in no degree relaxing his interest), since which time I have done my best to act as his substitute.

The Council will be presently asked to add another Branch to the Association—the West Kent Branch—the formation of which is chiefly due to the energy of the London Members, and to Dr. Hamilton Hall in particular. We welcome Miss Watt, its first General Secretary, to our meeting to-day.

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* Miss Beale, LL.D., Principal of Ladies' College, Cheltenham.
† The Hon. Sir John A. Cockburn, K.C.M.G.

Mr. Hudson and Miss Stevens have also been at work arousing interest in Child-Study in Bradford, with the result that visitors from Bradford are attending this Conference with a view to ascertaining more about our aims and methods of work.

A considerable amount of advertising and some propaganda work has been done in Nottingham and the neighbourhood in connection with this Conference in Derby, and we hope that it may result in the Derby Branch being placed on a broader and stronger basis.

A very promising sign is also the willingness of kindred bodies to co-operate or amalgamate with us. The Froebel Society Members in Manchester have some sort of understanding with the Manchester Branch; the Teachers' Guild Members in Liverpool with the Liverpool Branch; and during the last year the London University has arranged a most successful course of joint Lectures, to extend over three years, in connection with the London Branch; and, further, this Council will be presently asked to consider the question of the co-operation of this Association as a whole with the Childhood Society. Whatever our opinion may be with regard to the desirability or otherwise of amalgamation, we are grateful for these expressions of friendliness from influential Societies having similar aims to our own.

We have also during the last year been invited to appoint two representatives on the Council of the King Alfred School; and we have a Member on the Council of the Sociological Society.

We are also asked to send a Delegate to the Child-Study section of the International Conference on Education, to be held at Liège in September next. And we were represented at the Annual Meeting of the German Child-Study Association by Herr Levinstein, who offered to distribute our papers and copies of *The Paidologist.*

The Association is beginning to make its voice heard in matters of national education. The London, Birmingham, and Manchester Branches will all have something to say in their Reports this afternoon of protest or investigation in connection with the conditions of young children in elementary schools.

The promoters of Child-Study Conferences in Berlin and Leipzig have kindly sent us Reports of their Meetings.

So far I have been optimistic, but I must not conceal two less-promising symptoms. Firstly, the membership, though it has not decreased in number, has only very slightly increased. Some Branches, indeed, have fewer Members than they had last year. On the other hand, some very influential Members have been added to our list, especially in the London Branch. I trust it is not invidious to mention in this connection the name of Miss Kate Stevens, to whose indefatigable zeal the enrolment of several of these Members is due.

Secondly, the organ of our Association is still not supported as it should be by our Members. Until all Members care to read the Magazine, which is our corporate voice and our medium of communication, we cannot feel convinced of our solidarity; moreover, so long as it remains non-self-supporting, so long are our financial resources drained. If every Member subscribed, the Magazine would be not only self-supporting, but remunerative.

But for these two defects—the slightness in the increase of our membership and the feebleness of the support of our organ—remedies appear to be at hand. Propaganda work and the founding of new Branches might and can be more vigorously prosecuted, and a proposal is about to be brought before you for organised co-operation in the work of the Branches. This, it seems to me, would create a feeling of solidarity, and stimulate interest in the results of our work when they appear in the Magazine, or when they are compared and discussed at our Annual Conferences; common work would make it both desirable and possible for Lecturers to circulate from Branch to Branch, supplementing each other's Lectures, and ensuring an audience already interested in the particular subject on which they are well qualified to speak.

It has been suggested that an Annual Conference in London would be attended with good results, and might it not be possible for us, before many years have passed, to call an International Conference in London, which might be attended by Delegates from other educational and scientific bodies and by representatives of other Child-Study Societies in Europe and America, on which occasion we might be able to present some work of world-wide usefulness as the result of our combined efforts?

Meanwhile, it seems to me essential that we should educate our Members in the fast-increasing literature of Child-Study, and that we should have more guidance from well-qualified leaders in some simple methods of observing and recording, so that active participation in work having some definite end may maintain a steady and ever-increasing interest in that enquiry into Child-Nature which our Association has undertaken.

MARY LOUCH (*Hon. Gen. Sec. pro tem.*).

REPORT OF MAGAZINE COMMITTEE.

The Magazine Committee, in submitting a Report, begs to inform the Council that in the course of the past year a vacancy occurred in its numbers by the resignation of Miss Beale, who had been a Member since the first appointment of the Committee. Your Committee desires to observe that no Regulations exist defining its duties or regulating its procedure, and that, in point of fact, it has acted merely as an advisory body to the Editor or the Editorial Committee, and has only been consulted at rare intervals, when some new departure was proposed in the conduct of the Magazine. Owing to the wide separation of its Members it has been unable to meet, and so has had to conduct such business as came before it by correspondence, and, from the nature of the circumstances, has exercised no direct continuous influence over the editing or the business management of the Magazine. The Treasurer has reported direct to the Council. Since the change occurred which placed the editing of the Magazine in Commission, this Committee seems to have become redundant, and it is of opinion that such functions as it has exercised should be vested in the body responsible for both the editing and general management of the paper: this would, naturally, be the Editorial Committee, which would thus be in a much better position to judge of the best policy to be pursued, and to simplify and increase the efficiency of its work.

Your Committee regrets to learn that, in connection with the printing and publishing of *The Paidologist*, there is a sum of £30 6s. 11d. owing to Messrs. Norman, Sawyer and Co., as a deficit on the working for the last two years. Presumably, this deficit will continue to increase at the same rate if things continue on the present lines. The most obvious and natural way to avoid this is for each of the Members of the Association to become a subscriber, either individually, or, better, as a Member of his Branch, and for new subscribers to be found outside the Association. At the present time only 410 of our Members are regular subscribers, and of this number more than half is represented by the London Branch; and when it is pointed out that only 200 more subscribers are necessary to enable the Magazine to pay its way, and that 250 would make it financially successful, and that this number could readily be found among the Members of the Association, your Committee thinks the time has come when a determined attempt should be made to include the cost of the Magazine in the subscription of each Member, who should receive a copy as a regular privilege of membership. Failing this, steps must, it seems, be taken to diminish the cost of publication. Suggestions have been made by which a kindred society in London might be interested, and given privileges in the Magazine, and so become regular subscribers; and the Committee urges the Council to give these suggestions very careful consideration.

In the meantime, steps have to be taken to meet the existing liability, and it is suggested by your Committee that, as the debt is one of the Association as a whole, it should be met by increasing the Capitation Fee by, say, twopence per head, ear-marked for this purpose, and spreading the liquidation over several (say, four or five) years. It would still be necessary to raise the money to pay off the debt at once, and this might be done by private advances, secured by a lien on the future Capitation Fees assigned for this purpose.

The Magazine appears to be so important an element in the life of the Association, and so crucial an expression of its corporate existence, that, unless it can be put on a stable basis, there is danger that the Association may fall apart, and lose its general usefulness. Your Committee therefore submits these suggestions to the Council in the hope that they may help towards a satisfactory solution of the present critical situation.

REPORT OF EDITORIAL COMMITTEE.

Since the presentation of the last Report, three numbers of *The Paidologist* have been issued, to which articles have been contributed by Miss Partridge, Miss Drummond, Professors Adams, Earl Barnes, Alexander, Findlay, Patrick Geddes, and by Dr. Langdon-Down and Mr. Boyd. The names of these contributors are in themselves sufficient evidence of the high general level of the matter contributed to the Magazine. For two of these articles the Editors have to thank the Hon. Secretaries of the Birmingham and Manchester Branches, and in doing so they would again urge Hon. Secretaries to ask the writers of any suitable papers to be good enough to submit them for our consideration. On the whole, we are finding it easier to obtain suitable contributions, but have still to depend too much upon our own exertions in this direction. There is always the danger lest the Magazine should not be representative of the whole Association.

And in conjunction with this last point, the Editors would urge the importance of a more general support of the Magazine among the Branches. There has accumulated a heavy debt, which a comparatively small increase in circulation would have prevented. Seven hundred copies of each issue are printed, of which hardly five hundred copies are regularly sold. London is responsible for about half of these (225—240), and the number to be divided among the remaining seven branches is hardly considerable. With the November issue of last year, containing a valuable illustrated article on "Children's

Drawings," by Miss Partridge, an experiment was made by printing one thousand instead of seven hundred copies, but so far the sale of that issue has not justified the repetition of the experiment. Yet, spite of the fact that for that number eight extra pages were added (72 instead of 64), had all the thousand copies been sold, there would have been a profit of £4 on the venture.

A circulation of eight hundred copies of each issue would just make the Magazine pay for itself, including all incidental expenses. A circulation of nine hundred would make the organ contribute to the funds of the Association, even independently of advertisements; and it is not necessary to point out that advertisements would then come. The question of how to secure this should receive the earnest consideration of the Council. Two methods suggest themselves—improvement in the material of the Magazine, and increased interest on the part of the Members of the Association.

In this regard we would call attention to the important influence which any working agreement with the Childhood Society may have upon *The Paidologist*. Both for this and for financial reasons it may be necessary to make certain changes in management and form, and we would suggest that you should empower the Magazine Committee, or a special Sub-Committee, to deal with such points as may arise. It might prove advisable, as a means of obtaining a wider circulation, greater recognition, and, consequently, more advertisements, to have *The Paidologist* published in London; and even a change in its elegant, but little understood, name might be condoned, though the amusement of the world might be diminished thereby.

As before, the editing has been in charge of your Committee, consisting of Dr. Fletcher Beach (Chairman), Miss S. Young, Rev. J. O. Bevan, and Mr. T. G. Tibbey.

BRITISH CHILD-STUDY ASSOCIATION.

Statement of Accounts from April 30th, 1904, to May 8th, 1905.

RECEIPTS.

		£	s.	d.
1904—April 30.	Balance from 1903-4, including £2 in trust for Newcastle Branch ...	9	9	8
	Donation	1	0	0
	Capitation Fees at 2d.—			
1904—Oct. 3.	For 230 Members, Cheltenham ...	1	18	4
1905—April 8.	For 199 ,, Cheltenham ...	1	13	2
1904—Dec. 10.	For 67 ,, Edinburgh ...	0	11	2
1905—Feb 13.	For 155 ,, Manchester ...	1	5	10
1905—Feb. 24.	For 29 ,, Derby ...	0	4	10
1905—March 30.	For 213 ,, London ...	1	15	6
1905—April 13.	For 105 ,, Birmingham ...	0	17	6
1905—April 21.	For 64 ,, Liverpool ...	0	10	8
		£19	6	8

(*Signed*) MARY LOUCH, Hon. Gen. Secretary, *pro tem.*

EXPENDITURE.

		£	s.	d.
1904—May.	Programme Cards for London Conference	1	0	0
1904—Oct.	1000 General Circulars, London Branch	0	15	0
1905—Feb.	Affiliation Forms...	0	2	3
1905—March.	1000 General Prospectuses	2	12	7
1905—April.	2000 Programmes for Derby Conference, 120 Invitation Cards and Postage of same	2	3	4
1905—April.	Grant to Derby Branch for Conference Expenses	2	0	0
1905—March.	Travelling Expenses of Lecturer to Derby	1	1	0
1905—May.	Travelling Expenses of Gen. Secretary to Derby	1	0	0
	Stationery for the year 1904-5	0	13	2
	Postage	1	0	8
	Balance in hand	6	18	8
		£19	6	8

Audited and found correct, May 11th, 1905,

A C. TUKE.

Branch Reports.

BIRMINGHAM.

President—Professor J. H. MUIRHEAD, M.A.
Hon. Sec.—Miss A. J. DAWES, LL.A., 75, Gladstone Road, Sparkbrook.

Only two meetings have been held since the last report was sent. At the former of these, in February, papers were read by Mrs. Barrow, Miss Byett, and Miss Palmer on "The most pressing needs of Infants' Schools." There was a large attendance of Members, and an animated discussion followed.

At the March Meeting Dr. Walter Jordan opened a discussion on Mosso's book on "Fatigue." This proved not only interesting, but most helpful and instructive, especially to teachers.

The programme for next session is not yet arranged, but it has been decided to devote three of the meetings to the scheme for the betterment of Infants' Schools, as proposed by the Sub-Committee which was formed at the Derby Conference. A. J. DAWES, *Hon. Sec.*

CHELTENHAM.

President—Dr. H. CRIPPS LAWRENCE.
Hon. Secretaries—Miss CHEVALLIER and Miss ROONEY, Ladies' College.

Two meetings have been held since the last issue of *The Paidologist.* At the first of these, which was held on February 9th, Dr. Hamilton Hall delivered a lecture vigorously criticising the Questionnaire Method. It is a well-known and astonishing fact that educated people nowadays seem to have a special tolerance of the quasi-scientific fallacy. In Dr. Hall's opinion the use made of the Questionnaire Method affords an example of this tolerance. The special questionnaire which Dr. Hall had in his mind was that instituted by Dr. Lamprecht, of Leipzig, and already described in this Magazine. A perfect questionnaire presupposes a special prearrangement of conditions, the children being assorted into groups so that allowance can be made for every advantage and disadvantage of age, experience, teaching, health, social position, and a number of other things. But a questionnaire so conducted could only result in revealing the common measure of the whole collection of children so examined, a result that is worthless in regard to any information it can give about any individual child. This is the result of the questionnaire at its best; and very few questionnaires have been conducted under the conditions named. A questionnaire may be useful as a means of teacher-study, but for child-study it is useless; the study of children requires the patient, careful methods of the naturalist, replacing the crude observations of averages by the nice observation of details.

The last meeting of the Session was held on March 9th, when Miss Last read a paper on "School Methods." The methods of which the lecturer spoke were more especially those which should be used in the early years of school life, when formal instruction begins to replace the education hitherto given in the homes. Many illustrations were given to show how school-work, even at this period, can be made truly formative. For instance, it was shown that it is possible to construct a set of reading exercises out of sentences which have been composed by the children themselves. This is found to be a great improvement on the inanities of the first reading-book. The whole of Miss Lait's paper consisted of similar examples of the way in which the lessons of the school may be made to relate themselves to the experience of life. Treated thus the school becomes the natural successor of the home, carrying on, without a break, the work which was there begun.

Dr. Cripps Lawrence presided at both meetings. The attendance was good, and in each case the lecture was followed by a well-maintained discussion. T. M. A. COOPER, *Hon. Press Sec.*

DERBY.

President—Miss A. C. TUKE.
Hon. Secretary—Miss D. F. DYER, 17, Hartington Street.

The Annual Conference of the British Child-Study Association was held in Derby on May 11th, 12th and 13th. The Delegates and some of the visitors to the Conference were entertained by Derby residents. The Meetings were very successful, the discussions being particularly animated. Many thanks are due to the lecturers for their most interesting and inspiring addresses. Suggestions were made that Nottingham and other neighbouring towns might be willing to join Derby in forming a Branch of the B.C.S.A., which might be known as the Midland Branch. D. F. DYER, *Hon. Sec.*

EDINBURGH.

President—Prof. DARROCH.
Hon. Secretary—Mrs. ANDREW, 27, Alva Street.

This Branch has continued its course on Environment of Children—the following lectures having been given:—

February 12th—"AuditoryEnvironment," by Dr. Geo. Wilson.
March 15th—"Auditory Environment: Music as a Factor in Education." by Mrs. Kennedy Fraser.
May 16th—"Hygienic Environment," by Dr. Fowler.

All the lectures have been greatly appreciated, and probably the same subject will be continued next session. The plan of having papers in the same subject by a Doctor and by a Musician proved of great value to the listeners.

The Library has now been placed with Messrs. Otto, Schulze and Co., Booksellers, 20, Frederick Street, who have kindly undertaken to give out books to Members between the hours of 9 a.m. and 6 p.m. Saturdays, 9 a.m. to 2 p.m.

LIVERPOOL.

President—Prof. SHERRINGTON.
Hon. Secretary—JOHN HAY, M.D., 7, Rodney Street.

The membership, as judged by the numbers of subscriptions paid by Members for the last session, is 101.

The Meetings throughout have been well attended, and it has been satisfactory to note the excellent discussions.

It is a matter of regret that so few of our members take *The Paidologist.*

Since Christmas there have been four meetings. On January 20th the subject of "Second Dentition" was dealt with from four different points of view. *Dentist:* E. A. Councell, Esq.: *Teacher:* Miss Florence Sharpley; *Parent:* Mr. George Rathbone; *Doctor:* H. Armstrong, Esq., M.D. This method proved a great success, and it is proposed to apply it to some other subject in the coming session.

On February 10th Mr. Hewett read an instructive paper entitled "The Teacher and the Child."

Miss Last, of Birmingham, gave, on February 25th, a clear and interesting paper on "School Methods." This was one of the two meetings held in conjunction with the Teachers' Guild.

Our last paper was given by Robert Jones, Esq., F.R.C.S., on March 24th, the subject chosen being that of "Some Points in the Physical Development of Children." J. Hay, *Hon. Sec.*

LONDON.

President – Sir John Cockburn, M.D., K.C.M.G.
Hon. Secretary—Miss Kate Stevens, Carlisle House, Dartmouth
Park Hill, N.W.

The Session just concluded is in many respects the most important since the year Professor Earl Barnes was giving his University Extension Lectures on Child-Study in London. For, in the first place, this winter has seen the completion of the first section of the three years' course on "Evolution: as seen in the Child and the Race," a series of lectures given under the auspices of the London University and our London Branch; and, in the second place, the Childhood Society and the London Branch after Christmas combined their courses of lectures. The lectures were delivered in the Parkes' Museum, Margaret Street, W. The anticipations held out in the last report were amply justified. Such a continuous succession of large, crowded meetings neither Society has had any previous experience of.

On March 16th, Miss Margaret McMillan delivered a lecture on "Fatigue in Children." The work of Mosso was drawn upon, and a plea was specially made for the weaker children: those coming from poor, badly ventilated homes. The discussion was varied and lively.

On April 6th, Dr. Rabagliati gave an interesting address on the "Health of Children," urging the importance of due attention to diet, and the dangers of over-feeding, to which he ascribed the majority of children's ailments.

On May 12th our combined course concluded with the delightful and illuminating address of Professor Lloyd Morgan on "Imitation." He worked through a most cleverly graded set of examples from mimicry in insects—which is not imitation—to the imitation of an ideal as exemplified in the "Imitatio Christi." The lecture was so convincing that discussion was difficult. W. Sharman, *Hon. Press Sec.*

MANCHESTER.

President – Sir William Mather.
Hon. Secretary—Miss F. W. Harrison, Ivanhoe, Bowdon, Cheshire.

This Branch of the B.C.S.A. has held six meetings during the Winter Session. The following are the titles of the subjects:—

"Parents and Teachers, how they may co-operate in the Day Schools." Miss Burstall.
"The Curriculum of a Preparatory School." Miss C. Herford.
"Child-Study and its Relation to the Parent and the Teacher." Mr. J. C. Hudson.
"Educational Handwork." Mr. J. Judd.
"Physical Training." Miss J. B. Dickens.
"My Dog." Prof. Alexander.

Of this last lecture the following report appeared in the *Manchester Guardian* of May 29th:—"'My Dog' was the subject of a delightful hour's talk given by Professor Alexander to an audience of teachers in Manchester University on Friday night. Professor Alexander has studied the mind of his dog with scientific thoroughness, and he gave the fruit of his studies in a lecture full of charming humour. The psychological part of the lecture had, of course, much educational value, because of the analogies suggested to the student of the child-mind, but it was the biographical part that gave most pleasure. The tale of the dog's merits and demerits was unfolded with an air of philosophical aloofness, relieved now and then by some phrase that revealed a pardonable fondness. It was the faithful history of a dog's mind; his likes and dislikes, and the 'why' of each. How much does a dog reason? was the question all the experiments tended to answer. From observing his dog which, by the way, we were pleased to hear was an Irish terrier -- Professor Alexander has arrived at a rather modest estimate of a dog's mental power. His dog, he said, had learned 'how things go, but not 'the go' of them,' or, in other words, his actions were intelligent but not rational. He knew mechanically what effects followed from what causes, but not why they followed. Similarly, his virtues were not moral, they were merely habits; he did not know the reason for prohibitions – his sense of guilt was only the presentiment of a whipping. These were a few of the conclusions underlying the Professor's pleasant string of anecdotes about his dog, some of whose 'acquired dexterities' (the word 'tricks' being banished as unworthy) were related with ill-concealed pride."

It will be seen from this syllabus that the aim has been a wide one—to include any subject which might promote the science of Child-study and the well-being of the child. This aim is also shown by the fact that this Branch has also thought it desirable to hold combined meetings with the Manchester Froebel Association and the Teachers' Guild.

In addition to the Regular meetings, the Branch, following the example of other educational bodies, has undertaken a special piece of work during the Session, viz., the drawing up of a Memorial to the Education Councils of the District on the subject of Infants' Schools. This memorial, which has been very favourably received, reads as follows, and has been sent to the Manchester, the Salford, and other Education Councils, and also to various Inspectors: —

LADIES AND GENTLEMEN,

The Manchester Froebel Association and the Manchester Branch of the British Child-Study Association beg leave to lay before you the following suggestions relating to the conditions of work in the Infants' Schools of this district, with the hope that you will give the matter your careful consideration.

There is a consensus of opinion among all educationalists that little children between the ages of three and five years should not be subjected to the ordinary conditions of school, but should be allowed to develop freely under cheerful sympathetic guidance.

We would therefore suggest

1. That children until they have reached the fifth birthday should be considered as "Babies," and that no child should leave the Infants' School until it has reached its seventh birthday.
2. That there should be no formal instruction in the three Rs in the Baby Classes, and that the children between the fifth and sixth birthdays should be expected to do only the beginning of Reading, Writing and Number Work.
3. That it is a question of urgency that the classrooms for the Babies should be fitted in all the new schools, and, wherever possible, in the older schools, with movable seats and small tables for hand-work; and that there should be ample floor space for moving about and for games.

4. That the inspection of children under five years of age should only refer to methods and general management.
5. That the work of the lowest class in the Upper School should be carefully co-ordinated with that of the Infants' School, so that there may be no wasteful break when the child is removed from one to the other.
6. That the hours of instruction in Infants' Schools in the afternoon should not be more than two hours.

NOTE.—The birthdays mentioned in the resolutions should be understood to have occurred before the end of the school year.

Signed, W. MATHER, *President.*
S. ALEXANDER, *Vice-President.*
HENRY ASHBY, *Vice-President.*
J. J. FINDLAY, *Vice-President.*
CAROLINE HERFORD, *Vice-President.*
T. C. HORSFALL, *Vice-President.*
S. ALFRED STEINTHAL, *Vice-President.*
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February, 1905. *Honorary Secretary.*

WEST KENT.

President—Dr. HAMILTON HALL.
Hon. Secretary—Miss F. M. WATT, 14, Calverley Crescent, Tunbridge Wells.

I am asked to give a report of the events which led to the formation of the West Kent Branch of the B.C.S.A. It owes its existence to the London Branch: in the first instance to one of the London Council, Dr. Hamilton Hall.

Last Spring, when making some inquiries about the Child-Study Movement in England, I wrote to the Secretary of the Childhood Society for information, and was referred to Dr. Hall, who lives in our neighbourhood, and who had lately given a lecture to that Society. Dr. Hall kindly gave me a card for your Annual Conference last May, to which I went and returned, wishing we could have some meetings of that kind in Tunbridge Wells. I then talked it over with a few friends, who seemed interested, and then we thought it advisable to leave it till after the Summer was over. Dr. Hall said that, if it seemed possible to form a Branch, the London Council would be ready to help us, and that if I wrote to Miss K. Stevens she would advise as to the best way of arousing interest in the matter. Miss Stevens and Miss Louch both wrote many helpful letters of kind suggestions. Miss Stevens brought it before the London Council in September. Their quick response and the many kind offers of speakers for a preliminary meeting rather startled us, for we only had time to interest a few, and those personal friends. All we had to do was to provide an audience: no easy matter in a town where there are several meetings for every day, but we were determined to make every possible effort. The Tunbridge Wells Branch of the N.U.W.W. were just arranging for a Conference, so, at the suggestion of a friend, we asked them to bring it forward as the subject of their Conference, which they decided to do. Their Presdent (Mrs. Griffith-Boscawen) and Secretary (Miss A. Scott) took it up warmly, and with their help an audience was guaranteed. I hardly know how Miss Stevens found time for the many letters she had to write to us.

She arranged the programme for the Child-Study part of the meeting, and came down herself the night before. A successful meeting was held on November 5th, when Miss Stevens read a paper on "Child-Study"—a short account of the history of the movement; The Hon. Sir John Cockburn, K.C.M.G., M.D., gave an address on "Seed-time in Education"; Dr. G. E. Shuttleworth read a paper on "Child-Study in relation to Mental Abnormality." Dr. Fletcher Beach and Dr. Hamilton Hall were to have addressed the meeting, but time did not permit. Miss Hart also came down and was most helpful in distributing papers and answering questions. After the meeting 18 names were given in as Members. The first General Meeting was held on November 16th, at which a Committee and Officers were elected for the year. We have had four lectures.

December 6th—Dr. Fletcher Beach gave an address on "Mental Education."
January 21st—Miss Findlay—"Children's Drawings."
February 28th—Rev. G. F. Knott, M.A.—"Religious Training of the Young."
March 28th—Rev. J. C. Bevan—"Child-Study: its aim and the need for its extension."

The work we have done has necessarily been preliminary. and therefore rather vague. The Members are asking for something more practical for next Session. The varying standpoints of parents and teachers have come prominently into notice, and so for the next Session, as far as possible, we hope to divide the lectures equally between papers from the home aspect and from the professional aspect. We hope to arrange a lecture once a month—from October to March.

We are just starting a Reading Circle. Those who will probably join ask for some explanation of Froebel's Principles; so to begin with we have decided to discuss "Child and Child-Nature." (M. N. Bulow.)

We have at present 31 Members. Our subscription is 2/6 for teachers, 5/- for others, to include the three issues of *The Paidologist*.

F. M. Watt, *Hon. Sec.*

All communications, relating to their respective subjects, should be addressed to:—

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EDITORIAL.

There are several articles in this number which should interest our readers. Professor Earl Barnes' Paper on "Child-Study for Parents" states clearly the duties which parents owe to their growing children. Dr. Shuttleworth deals with mind-blindness and mind-deafness, which are met with in some special schools for the feeble-minded, and incidentally mentions ambi-dexterity. Mr. E. Cooke's Paper is a plea that children should draw from animate objects, if possible, and not to copy the drawings made by others. Miss Stevens inserts "Suggestions for Individual Child-Study," by Dr. E. Kirkpatrick, and would be glad to correspond with other members who are interested in the subject. Mr. Bevan, who has just returned from South Africa, inserts methods by which teachers who wish to take up work there should proceed to get appointments. Miss Louch has two pamphlets, one on "Child-Study for Teachers," and the other, "The Organisation of New Branches of the British Child-Study Association," being numbers two and three of pamphlets she has issued. The first pamphlet, on "What is the Use of Child-Study to Parents," was inserted in the last number. We now insert the last two pamphlets, and would draw our readers' attention to them, for they are eminently practical and businesslike.

The Rev. J. O. Bevan would be glad if publishers and editors would take notice that he has ceased to be Review-Editor, and that his post is now filled by Miss Young, whose address is Home and Colonial College, Wood Green, London, N.

The next Annual Meeting will take place at Cheltenham, under the presidency of Miss Beale, LL.D.

F. B.

[*The Editors wish to remind readers that the views expressed in the various papers must not be assumed to coincide in all points with those identified with the Association.*

Child-Study for Parents.

By Professor EARL BARNES.

In the process of our development we have passed through an age of superstition, an age of faith, and an age of reason. To-day we are all living in an age of knowledge. We still love our superstitions, but we demand that we shall know their meaning and their genesis; we cling to faith, but we want it backed by observation and experience; we approve reason, but we must be assured that the major premiss is true, and we prefer to have the conclusion verified by a convincing experiment. "The affairs of life," we say, "are neither to be wept over, nor laughed at—they are to be understood."

This present-day attitude of mind is perfectly illustrated in our attitude towards war. I doubt if physical bravery was ever before so common in the world as it is to-day. We know that there are many worse things than dying, and so we are ready to die if need be. But we also know that ignorant bravery is perfectly incapable of winning battles, or of righting wrongs, if it be opposed by definite knowledge. Imagine Cæsar invading Germany to-day. At the head of his invincible legions he would seek to throw himself on an invisible enemy presenting a frontage of forty miles. The general opposing him would be seated on a camp stool, twenty miles away, with accurate maps of the country before him, and with carefully-studied plans for distributing the commissariat and the hospital corps. Telegraphic and telephonic instruments would connect him with all parts of his forty miles of frontage. Before Cæsar could get within two miles of his enemies, his legions would be blown to pieces with lyddite shells, thrown from invisible batteries using smokeless powder. Great are enthusiasm, devotion and courage, but they are jewels to be set in a massive band of definite knowledge.

One sees this clearly in the presence of marching legions and battle-ships surrounded by torpedo boats, but the facts are the same in the constant struggle for life in which we are all involved. We have a new baronage rising in all civilized lands. It no longer conquers by the sword, but with definite knowledge it directs the armies of labour, and it conquers with instruments of precision. Before these new barons of industry the older barons of the sword are helpless. Their possessions and their power are being transferred to the men who "know."

This knowledge is the most valuable asset a nation can have. I do not mean the artificial knowledge of classics and philosophies, but knowledge of the animate and the inanimate world around us. To neglect this fundamental fact of our civilization in any field of activity is to court disaster. To carry on a business by the old method of "cut and try" is to insure bankruptcy; to treat a disease by the advice of a friend or by your own experience is to lose your best chance of recovery.

It was inevitable that this philosophy of life should be first applied in the world of inanimate objects, and that after that it should be applied to the lower forms of life. It was equally inevitable that the method of direct study of realities should in time be applied to human beings, and, last of all, for reasons which I shall indicate later, to children. To-day we know almost as much about the laws governing the growth and development of children as we do about the laws governing the growth and development of chickens, though probably more definite and exact study has been given to chickens than to children. In either field a careful student could, to-day, collect a few hundred books and pamphlets embodying the results of direct study.

It is difficult to get even teachers, who are devoting their lives to the care and culture of children, to realise that their one all-important study is the nature of the children with whom they work. They are often content to master their tools, regardless of the material on which they are to use them. Imagine a farmer spending his time in studying ploughs, harrows, hoes, and grain drills, without carefully considering his land.

There is certainly no other business in which men and women engage which is so widely practised,—one might almost say, so universally pursued,—as raising children. First and last, almost everyone tries his hand at it, either directly or as a foster parent. There is no other business which touches so large a range of our passions and beliefs as does this business of growing children; and there is no other in which we spend so much money or in which we spend it so gladly. The one topic in which every father and mother is deeply and eternally interested is their child. A man came recently to sell me an encyclopædia. I did not want the books, but I did want to know how he managed to approach busy men and women with such a dull commodity. "Oh," he said, "in nine cases out of ten the people buy them for their children. In selling books," he continued, "it is the first step that counts. If you can get a man or woman to talk about their children, then you've got 'em."

But not only is the raising of children the most universal, the most absorbing, and the most expensive business on earth, it is also the most difficult. We sometimes think it a difficult thing to manage our own personal lives well, but these children of ours are new and up-to-date editions of ourselves. Our lives have lain in the bow-and-arrow stage of existence; but our children are going on into the age of gunpowder. Our lives, too, have been simplified through giving up many dreams as not for us. All these dreams spring up again in our children, and demand fulfilment. They must be strong, healthy, and handsome; they must have perfect teeth and a good carriage; they must be musical, artistic, and literary. Their present mental gifts—for every child is a genius in the cradle—must be brought to full perfection. They must be social favourites, political leaders, and business successes. They must have an eager appetite for life, living their lives freely and fully; and they must be pillars of the Church and leaders in society.

And how shall all this be done? Mr. Herbert Spencer, who has probably had a larger influence on our educational ideas than any other man during the last fifty years, in discussing the values of different kinds of knowledge, maintained that after that knowledge which protects our lives and provides for sustenance, the next most important is that which prepares for parenthood. No one can seriously doubt the truth of this statement; and yet we have hardly begun to realize its truth.

What is, then, the right relation of parents to the study of children? Personally, I am inclined to believe that their work should generally lie in making applications rather than in advancing new discoveries. Parenthood can do very much for a man or a woman, but it sharpens our sensibilities rather than our intelligence, and all stimulation of the sensibilities probably weakens intellect.

In some respects, however, the parent is well placed for studying children. In the first place, he has the specimen; he does not have to catch his rabbit if he wants to make a rabbit pie. But this is opportunity, nothing more. I have gold in my purse, leather in my shoes, and I came here on a railroad train, and yet I have never studied gold, leather, or railroads. In fact, the more a man has of a thing, the less he generally studies it. The very fact that he has it, and hence has to take care of it, makes it probable that he will have less time to study it.

In the second place, the parent has an intimate and sympathetic understanding of his child, and this is often said to be a good condition for studying it. It is quite the reverse. Who would think of saying that because a physician has an intimate knowledge of his child, therefore he is best fitted to understand and treat it ? The better physician he is, and the more perfectly he knows his child, the more quickly will he send for another practitioner if it falls ill. As we have already said, love and sympathy paralyze the mind. What, then, do love and sympathy do for the parent ? They take him into the nearest approach to heaven that earth can give. Only the man who has held his own child in his arms, and entered into intense spiritual sympathy with it—only the father or mother who has worked and economized and sacrificed for little ones—knows what God has done for man.

Yet it remains true that the attitude of mind which guides and helps must always be opposed to the attitude which observes, experiments, and records. When the child begins to move about by itself, the father or mother who is worthy of the name, instead of watching to see the steps through which it naturally develops, will be offering fresh incentives, will be helping with outstretched hand and encouraging voice. When speech begins, the parent, instead of noting down and classifying vocabulary as it appears, will spend his time in admiring the wonderful precocity of his child, or else in stimulating it with jingles worked into its nervous system with trit-trot exercises. If a child draws a man on a horse so that both the man's legs show, when, in reality, but one can be seen, the investigator would wait to see when this descriptive stage of drawing would pass over into a representative stage. On the other hand, the parent would at once try to show the child that but one leg could be seen, and hence, that but one should be drawn.

In the development of this new science of Child-Study it is remarkable how little work has been done by parents. Darwin, Preyer, Perez, Mrs. Hogan, and a few other abnormally intellectual fathers and mothers, have made contributions to our knowledge, but, for the most part, our best work in the direction of investigation has been done by celibate students.

It is not, then, primarily as students that parents should devote themselves to Child-Study. If they are intelligent, they will learn much from their children, and that knowledge will be of value to others ; but it is in the application of the results of investigation that they have a monopoly of the field. In fact, Child-Study has significance only in so far as parents and teachers apply its results to their children. And these results are valuable in various ways. In the first place, they can give us exact knowledge in fields where we can hardly afford to learn for ourselves. The very simple and scholarly books by such men as Griffith and Star, on the care of infancy, will enable any intelligent mother to meet the difficult questions of food, clothing, sleep, and exercise,. with the consciousness that she is doing the very best things for her child that can be done. The multiplied studies that have appeared during the past few years in the *Paidologist*, in the *Pedagogical Seminary*, and in books like Kirkpatrick's *Child-Study*, will enable the parent to meet the difficult problems of childhood with a wisdom and certainty not hitherto possible. Even the difficult problems of early youth become more intelligible and more capable of guidance to one who is acquainted with Dr. Hall's monumental work on "Adolescence."

In the second place, knowledge in this field lifts the work of the father and mother into a plane where it loses the insignificance and pettiness often associated with the nursery. A few days ago I saw a father with a child, about three years old. The child had been cautioned not to write on the wall, and yet some scribblings had appeared on the staircase. The father called the little one, and said: "Did you do that?" "No, daddy," said the child, looking straight into his eyes, but with a strained expression that told of effort. "Think a minute," said the father; "did you not do it?" "No," said the child, "I did not." No effort seemed to help until the father said, drawing the little one up on his knee,—"Did you do it with a pencil or a crayon, dear?" "With a pencil, daddy," said the child, dropping her eyes. "Well, don't do it again," said her father, as he set her down. "Why not, daddy?" said the child. "Because I should have to wash it off," he continued, "and I have no time for that now." "Oh," said the little one, "I will not do it any more." Now, had the father looked at this one bald lie, he could have been very unhappy, and could have made a good deal of misery for himself and his child. But he knew that all children lie who are worth raising, because fraud is the force of weak natures. He knew, too, that the only way to cure lying is to help the child to understand its uselessness and its power to harm everyone concerned. The parent must help the child to this knowledge, and perfect sympathy and confidence between them is an indispensable condition for working it out.

In the third place, the results of Child-Study will help the parent to do much for the child which can not be done in the schools. Take, for instance, our present vexed question of religious education. No one can read carefully Starbuck's *Psychology of Religion* and the long series of similar studies in the *Pedagogical Seminary* without seeing that children climb up to their conceptions of God and Heaven through man and earth. In infancy and childhood they need anthropomorphic teaching; in youth we must anticipate the age of doubt, and provide for the exalted devotion of early adolescence. This is work which cannot now be done in the schools; and, in any conditions, it is best done by father and mother.

Even within the field of knowledge generally thought to belong to the school curriculum there is much that can be done only by an intelligent parent. Just now we are hearing a great deal in England about physical deterioration. Within the next two or three years physiology will, doubtless, be forced into every course of study where it is not already found. In America, a similar condition has been brought about, mainly through the efforts of the prohibitionists. In several schools where physiology is compulsory, I have examined the children as to the subjects they liked best and least. The results are the same in every case. Only two or three per cent. of the children select physiology as their favourite subject at any age, while the number who dislike it mounts steadily from one per cent. at eight years old to twenty-five per cent. at fourteen. Judging from their compositions, there is in children a native repugnance to learning about vital functions in school. The training they need at this time should come in connection with good habits in eating, cleanliness and exercise. This is the natural work of the home.

The father and mother must, then, come into living and vital relations with this body of new knowledge which is being organized by the Child-Study movement. It is to aid them in this work that the British Child-Study Association is organized. They need the Association, and the Association needs them.

Some Physiological Problems in Education.

By G. E. SHUTTLEWORTH, B.A., M.D., etc.

FORMERLY MEDICAL EXAMINER OF DEFECTIVE CHILDREN, LATE SCHOOL BOARD FOR LONDON.

(A Paper read at the first combined meeting of the C.S.A., London Branch, and of the Childhood Society, February 9th, 1905.)

Many months ago, when invigorated by a summer holiday, I rashly accepted an invitation from the energetic Secretary of the London Branch of the B.C.S.A. to read a paper before that Society, and gave a somewhat indefinite title for the same. Had I contemplated the enlarged audience and collective criticism consequent on the auspicious association, for lecture purposes, of that Branch with the Childhood Society, I should, no doubt, have shrunk from the ordeal of being the first to address the combined and numerous assembly which I have the honour to see before me to-night. I take, however, to myself some comfort from the consideration that the topics to which I invite your attention have interest alike to those whose professed object is psychological research in the region of Child-Nature, and to those associated for the scientific study of the mental and physical conditions of children. In my view, any system of psychology which will be of practical utility to the teacher needs to be built up on a physiological basis : in other words, can only be gathered from some knowledge of the structure and functions of the brain and nervous system, the material instruments of the mind. Mental physiology is, therefore, a subject deserving of attention by all who seriously undertake consideration of the problems of Child-Study.

I do not propose this evening to dilate upon the more physical aspects of physiology in relation to education—you will find these most interestingly treated in a " Lecture on Physiology for Teachers," by Professor Sherrington, delivered before the Childhood Society, and published in separate form by that body. Nor can I profess to set forth to you any comprehensive view of the structure and functions of the brain such as was so luminously and so ably presented not long ago to the London Branch of the Child-Study Association, by Dr. Mott. I merely ask your consideration of one or two problems in practical education, the solution of which, as it seems to me, demands a degree of understanding of physiological conditions normally existing, and of the consequences resulting when there is a departure from the normal, either through defect or disease.

In considering the topics I should bring before you to-night, I have found myself attracted to a group of problems, at first sight not very closely connected, but yet having this common character, that in some way or other they have relations with the speech centre in the left hemisphere of the brain. I assume that you are all aware that one of the earliest definite scientific discoveries of the localisation in the brain of special function is the dependence of the motor function of speech upon the integrity of the third left frontal convolution (a discovery made some forty years ago by Broca, after whom the convolution has been named). Such, indeed, is the rule as regards right-handed individuals, and there is evidence that with regard to the 2 or 3 per cent, of folks who are preferentially left-handed, *their* speech-centre is in the corresponding convolution of the *right* hemisphere. Now, of late, there has been much talk of the desirability in the training of the young of the culture of ambidexterity,—that is to say, of the equal training of both hands alike in drawing, writing, and manual work, and, subsequently, for handicrafts and trades. I propose, therefore, to say a few words on this subject in its educational aspects, and then to refer, in some little detail, to certain anomalies of speech and of graphic power, and more particularly to those physiological puzzles known respectively as *word-blindness* and *word-deafness*, anomalies which I may say are not merely of pathological, but sometimes of practical pædagogical interest.

First, we may ask why are the majority of children, as we know them at the school age, right-handed ? An old theological writer explains the matter to his own satisfaction on the theory that Eve was taken from the left side of Adam, and that from that time onwards he and his descendants, especially his male descendants, have been lop-sided, the right always taking the pre-eminence ! Our monkish author was no physiologist ; yet I find a scientific writer in the *British Medical Journal* for January, 1905 (Dr. Bishop Harman) arguing that v sceral asymmetry consequent upon the erect position of man, and, more especially, the dextral disposition of the cæcum (that portion of the large intestine associated with the vestigial structure so famous in these days of appendicitis) give to the right side a preponderance. However this may be, there seems ample evidence that ambidexterity, even if it existed amongst cave-dwellers and the Eolithic tribes who inhabited Britain in the pre-glacial period, and who would seem to have fashioned flint instruments adapted for the use of the right hand and of the left hand respectively, disappeared gradually with the progress of civilization and the introduction of more refined and intricate arts and crafts. Moreover, there appears to be good reason for the opinion that has been advanced, that the preferential use of the right hand coincided with the gradual development of language. It has, indeed, been surmised that right-handed gesticulation, the earliest form of conversation with historic man, by degrees led up to definite articulate speech, and that dextral preference promoted the development of the left hemisphere of the brain, especially of the third left frontal convolution.

Another reason for dextral pre-eminence is amusingly put by Dr. Harman in the paper previously referred to, in which he thus pictures an incident in the life of primitive man. " Suppose " (he writes) " a fight between two of these men over some desirable spouse or coveted meal. Man No. 1 smites Man No. 2 a mighty blow below the left pectoral region, and, knocking his enemy out, secures the desired booty. But Man No. 2 communes within himself, and his awakening intelligence connects the knock-out blow and certain palpitations under the site of the blow—so, covering the aching part with his nearest available fore-limb, he falls upon his gorged conqueror with his single free arm, and slays him with a blow on the region he had found weak in himself. He has learned the secret of division of labour in his fore-limbs !—a *left* shield arm and a *right* fighting arm. To those of his kind who follow his cunning selection of his natural weapons there comes victory over those who do not follow him, or faultily oppose fighting arm to fighting arm, and shield arm to shield arm—that is, become left-handed. But the death of the less cunning ones would not necessarily mean the establishment of a right-handed succession, for the victorious right-handed ones, appropriating the females of their victims, would beget to themselves offspring who would revert to the custom of their *maternal* ancestry ; and the occasional occurrence of left-handed folk in our days may fairly be put down to such a habit of reversion."

Professor Cunningham, of Edinburgh, the eminent anatomist, stated in his Huxley Lecture at the Anthropological Institute in 1902, that right-handedness began to be developed as soon as man assumed an upright gait, "feebly marked, no doubt, in the earlier stages, but gradually gathering strength as the connection between the hand and the brain became more and more intimate, and as the work allotted to the hand grew in importance." He is further of opinion that right-handedness is a character that has been attained in the ordinary course of the evolution of man "by the subtle process of natural selection," and that it is due to a parentally-transmitted functional pre-eminence of the left brain, which he attributes to some structural character, the exact nature of which has not yet been demonstrated, though the Professor is persuaded that it exists.

Sir William Broadbent has stated that the specific gravity of the left hemisphere exceeds that of the right, but this has not been quite clearly made out, and it must be conceded that there is no proved anatomical evidence of the alleged natural superiority of the left hemisphere. Moreover, it is but fair to point out that in cases of preferential left-handedness, the right hemisphere has equivalent functions (those ordinarily attaching to the left hemisphere being in abeyance unless and until developed by training of the right hand); and so eminent an authority as Dr. Ferrier, in *Functions of the Brain*, p. 450, states "that there is no reason, beyond education and heredity," why the speech centre should be located in the left hemisphere. "It is quite conceivable," he says, "that the articulating centres of the right hemisphere should be educated in a similar manner," and holds that in some cases of destructive disease of the third left frontal convolution (Broca's convolution) the faculty of speech may be regained by the education of articulatory centres to the right hemisphere, especially in young subjects. And Sir William Gowers states that "in children destruction of the left motor speech centre never causes lasting loss of speech, as it does in adults. However complete the loss may be at first, speech is regained, and before long it is difficult to detect any imperfection. There must, therefore, be a capacity for the acquisition of voluntary speech processes on the right side of the young, which there is not in the adult." And as it would seem that the speech centres are educated, and become motorially active on the same side as the manual centre, it is thought that by the culture of ambidexterity the reserve speech centre, that on the right side, would attain a state of activity so as to be available for speech in the event of failure from disease or accident to the left.

I have read Mr. Jackson's recently-published book on *Ambidexterity* with much interest, and some of his arguments, especially that of the desirability of having in reserve a well-trained left hand to take up, if required, the work ordinarily done by the right, and of the possibility of having ready a well-equipped speech centre on the right side of the brain, to take up the functions of the left when damaged by disease or accident, are worthy of most careful consideration. But I am not convinced that his claims (implied, if not expressed) that by the culture of ambidexterity we should gain at least 30 per cent. of working power will be justified by experience. I incline to think that the nervous force of each individual has a potential limitation, and that a bilateral distribution would tend to diminish intensity now concentrated on the one side, so that the cunning and precision of the right hand might deteriorate in proportion to the distribution of dexterity between the two hands. Specialisation has, indeed, been the law of human development, and the right hand accomplishes tasks, with the assistance of the left, which might be less dexterously done were there two dexterous hands. "Co-ordination of bi-manual action" seems indeed the desideratum to be aimed at in education, rather than drilling either hand to do identically the *same* work as the other. In fact, one may say of the rôle of the two hands much as was said by the diplomatic Frenchman when asked his opinion of that of the two sexes in the world's work: "It is not a question of superiority or of inferiority, but of difference." It will be most interesting to watch the results of ambidexterous culture under the stimulus which the foundation of a society for its promotion will probably give it in this country. It is a matter which the British Child-Study Association should take note of, without prejudice, as regards its effect on mental power and on clearness of thought and of expression, as well as upon manual usefulness. It has been suggested, for instance, in America that one effect of diffusion of energy over both hemispheres of the brain by bi-manual culture, in lieu of comparative concentration in one, may be to modify the activity of Broca's convolution so as to interfere with, it not to impair, articulatory aptitude; and certain investigations made by the Department of Child-Study in the Chicago Public Schools (limited, however, to 5,300 children) go to show that unidexterous children,—that is to say, children whose right-hand grip showed decided superiority over that of the left,—were, as a rule, intellectually superior to those whose hand-grip on the two sides tended to equality. The same conclusion was arrived at in connection with tests to ascertain the degree of motor-control on either side. (See *Chicago Public Schools' Department of Child-Study, Reports*, 1899–1900, pp. 48–50, etc., and 1900–1, p. 43.) It should be remarked that these conclusions, based on finger movements, do not at all militate against the utility of ambidextral free arm movements, such as are advocated by Mr. Liberty Tadd.

If I may venture to take you, in the short time remaining, for a brief excursion into the domain of cerebral physiology, or (if you will) physio-psychology, as elucidated by abnormal conditions, I should like, before concluding, to say a few words about word-blindness and word-deafness. That these are not mere pathological puzzles, but come into the purview of practical pædagogy, is, I think, shown by the fact that several cases are referred to and illustrated in the last published Report of the Medical Officer of the late School Board for London (Dr. Kerr), and that teachers themselves are beginning to recognise the existence of such partial defects in pupils, instead of imputing their failings to wilful laziness or stupidity. Mr. J. C. Tarver, in a book called *Observations of a Foster Parent*, published in 1897, speaks of cases of this type which had fallen under his notice as a teacher, describing one as a case of "sound-blindness"—boys who had trouble in reading and spelling, not (he concluded) from wilfulness, but from infirmity. It is an example of how members of the medical and teaching professions may help each other when I state that for some twenty or thirty years past physiologists and physicians have been studying the conditions under which speech abnormalities and defects of the visual and of the auditory memory may be accounted for. The more striking forms of speechlessness occurring in adults, from disease or injury affecting the left inferior frontal convolution, termed *aphemia* or *aphasia*, first pointed out by Broca, in 1861, underwent pathological investigation at the hands of such men as Küssmaul and Lichtheim, in Germany, and Broadbent and Bastian in England. The attention given to this subject led to the discovery that in addition to these major defects there were others, such as an impaired memory for words (*amnesia verbalis*), dependent on lowered excitability of the auditory word-centre, word-deafness of greater or less degree due to imperfection, damage, or isolation of that centre, and word-blindness, partial or complete, due to similar conditions of the visual word centre, together with incapacities as to writing and drawing (*agraphia*), without, necessarily, implications of speech, which, though first studied from the point of view of disease in adults, were more recently found to be sometimes dependent on congenital imperfections in children, so as to have a definite bearing upon education. In 1897, Dr. Kerr, in his admirable Howard Medal Prize Essay on School Hygiene, referred to such exceptional children as a puzzle to their teachers, though, when the nature of their defect was understood, not unsuitable for the ordinary school. "*Agraphia*," he writes, "may be unintelligible to a teacher, especially if it occurs (as in one of my cases) in a boy who can do arithmetic well so long as it involves Arabic numerals only, but writes gibberish in a neat hand for dictation exercises; a boy with word-blindness, who can spell the separate letters, is a trouble; another who has only since his ninth birthday begun to speak intelligently, although understanding all said; another, who is not imbecile, hears well and is dumb. These are extreme cases, but slight cases are also met with, and more frequently faults of speech common up to eight years usually clear up about that age, but there are curious defects here, too. Some are stone-deaf; others wanting in ideas of number, though they do other work well; a few have no idea of drawing." And after seven years' further experience, Dr. Kerr thus writes, in his last Report as Medical Officer to the London School Board:—"A considerable number of cases have been detected where reading and writing beyond the most rudimentary attempts seem almost impossible of acquirement. Many of these children have marked mental feebleness, *others seem scarcely amiss in many respects.* The want of *literary* ability is probably more general than is supposed, . . . and though marked cases of 'aphasia' are rare, there are many cases which present relative degrees, which are chiefly shown in inability to recognise words or to spell anything like the words dictated, whilst, at the same time, the child has fair or good faculties in other respects, as, for instance, in mental arithmetic. These cases have no actual disease of ear or eye, but yet may be regarded as relatively deaf or blind. Their detection is of considerable importance, as the child may even be deemed imbecile if its defect is unknown. On the other hand, to attempt to teach a word-blind child to read or write is quite hopeless, and an aphasic boy cannot be made to speak, or an agraphic child to write, however intelligent they may be." Then follow some interesting illustrative cases, one or two of which I will quote:—

1.—*Case of Word-Deafness.* "W. C. First noticed in Infant School. Supposed imbecile, as he pays no attention to what is told him; he has good hearing, and never speaks.

After three months at Deaf School, sent off as practically imbecile. In special school learned to write from transcription, and does good handwork. Does not recognisee his own name when called. '*Word-deafness*' diagnosed; teacher directed to instruct him by articulating and writing. Rapid progress, and acquirement of vocabulary through lip-movements, which he has to make himself before he can understand words spoken to him. Exceedingly good at drawing and all handwork and calculations."

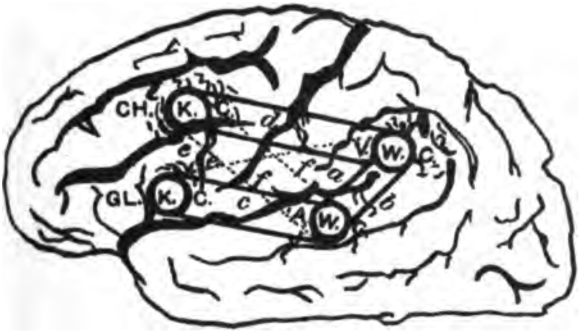
2.—*Cases of Word-Blindness.* (1) T. S. First seen in Standard IV.; can do all other school work, but cannot read a word, and writes rubbish; he can do any ordinary arithmetic which only involves Arabic figures, draws and recognises pictures, but is totally word-blind; writes well from transcription, but gibberish to dictation: (as an illustration, '*la hase tis erans and krout*' is the boy's rendering of the dictated line—"The drinks were ale and mead.'). Three years later, when earning 18s. per week, he correctly wrote the sums of money dictated, using Arabic figures, and multiplied correctly (*e.g.*, £13 6s. 8d. multiplied by three equals £40, and writing in figures, £583,121 2s. 11¾d.), but on attempting to write the larger sum in words, wrote an unintelligible line below it." (2) "W. K., aged twelve. This boy can do much school work, can draw well, but is '*letter-blind*.' He writes his name neatly, but cannot tell a single letter in it. He can recognise by ear many words when spelt over to him, but not when written or printed."

Though marked cases of such defects are comparatively rare, minor degrees of infirmity are probably not uncommon. Dr. C. J. Thomas, Assistant Medical Officer (Education), L.C.C., has, indeed, put forward the estimate that one in two thousand of all London Elementary School children may be expected to show word-blindness to a considerable degree, and has noted nearly one hundred instances of the condition in Special School Case books. It seems to be much more frequent in boys than in girls. Naturally, cases of word-blindness come under the occasional notice of ophthalmic specialists, to whom the children are taken for the relief of supposed eye-defects which are found not to exist, and Dr. Sydney Stephenson, amongst others, has recorded some interesting cases of this kind in the "*Reports of the Society for the Study of Disease in Children*" (Vol. IV.).

Of word-deafness the recorded number of cases is comparatively small, but it may be reasonably surmised that in its minor forms it is not uncommon, and militates against progress under oral instruction. Dr. Thomas gives an account of a characteristic case in a boy of eight years, who could hear and repeat spoken speech perfectly, but understood nothing of what was said: that is to say, he could repeat words by sound, but yet not apply them, though not mentally defective in the ordinary sense. In another case a boy is "shown a picture of a house, and asked to point out the roof, was unable to do so, but if pointed out to him he immediately calls it *roof*." Such children seem to depend upon their eyes rather than their ears for the acquisition of knowledge.

Intelligent teachers have long recognised the fact that amongst their pupils some learn more readily through the eye, others through the ear: in other words, that memory in the first class is of a visual, in the second of an auditive type. Upon what does this relative facility depend? Not, necessarily, upon superior activity of the external organs of sight or of hearing, but, rather, upon superiority of visual or auditory receptivity. Cerebral physiology will explain that in addition to the apparatus for focussing sights and sounds, and for conveying those focussed impressions to the perceptive centres in the brain, there is also in each case an area of grey matter, wherein are retained the memories of past visual and auditory impressions. It has even been attempted to localise these areas, that for visual impressions in the angular gyrus that for auditory impressions in the upper temporal convolution. However this may be, they are in different parts of the brain, and in processes in which both senses are required, as, for instance, in writing from dictation, connecting paths between them must be available. But in the process which we have taken as an example, an additional centre has to be called into play, for the hand has to write the words which have been received through the ear and recognised by the auditory centre. Another path has therefore to be established; and more than this, there is, with the practised writer, a memory of the movements of the hands and fingers made in forming letters and words, a *kinæsthetic* centre, as it is called, facilitating fresh efforts by reviving impressions of former movements. To illustrate my meaning, I venture to borrow from one of Dr. Bastian's books (that on *Aphasia*) a diagram showing the approximate sites of the four word-centres, and their commmissures. (See following page.)

Gl.K. represents the *glosso-kinæsthetic* centre, or Broca's convolution, the "speech-centre," as it is often called; Ch.K., the cheiro-kinœsthetic centre, from which may be incited the movements of the hand used in writing; V.W.C.



represents the visual word-centre; and A.W.C. the auditory word-centre. It will be seen that these centres are connected by a double set of commmissural fibres, *a*, *b*, *c*, *d*, *e*, *f*. As Bastian truly remarks: "The revival of words for speech is a complex process," and for it to proceed normally, the normal action and integrity both of centres and commmissures is essential. For naming an object looked at, the visual centre, the auditory word-centre and the glosso-kinœsthetic centre need to be functionally active and to be linked up. To write from dictation, the auditory and the cheiro-kinœsthetic centres must work perfectly and in harmony. If the auditory word-centre A.W.C., (the portion of brain in which auditory impressions are stored, and whence they may be revived) be originally defective, there will be psychical, though not physical deafness, and questions, though heard, will not be understood. An interesting case of partial word-deafness is recorded by Fränkel, in which, when the man was asked, "What is a fork?" he replied, "I don't know what you say." But when a fork was shown to him, at the same time that its name was pronounced, he not only recognised the fork, but comprehended its name and repeated it, the visual image of the object here helping to revive the auditory image of the word. (Quoted by Bastian, *Aphasia*, etc., p. 158.)

It seems probable that the word-centres themselves are more often at fault than are their commissural connections, and thus a partially word-deaf pupil may be helped in his speech by imperfect auditory impressions being reinforced by more perfect visual impressions. The glosso-kinœsthetic impressions also help in the correct production of words once learnt. The practical hint of this physiological puzzle is,—in cases of word-deafness, teach, as much as possible, through the eye. A word-deaf pupil will not recognise his own name when called by another, but if made to call it himself, by a process of lip imitation, he will properly apply it.

A word-blind pupil has his visual word-centre imperfect, so that he is unable to recall the form of words, though he can hear them and reproduce them vocally; but if set dictation, he will write "gibberish." May not some cases of bad spelling (so frequently met with) depend upon minor degrees of word-blindness, involving inability to revive correctly the forms of words? It is remarkable that word-blind children can usually distinguish *Arabic numerals* (though not *Roman letters*), and are sometimes good arithmeticians. They have, as a rule, a good auditory memory, and a patient of Hinshelwood's is said for a time to have concealed his difficulty in reading by learning his primer (read over to him) off by heart! In this case the auditory word-centre may reinforce the visual, but it would seem that by dint of early persevering training even the imperfect visual word-centre may be improved in function; and Nettleship records a case of an "alexic" boy who ultimately learnt to read, and became a lawyer. Dr. Kerr, however, is of opinion "that to attempt to teach a word-blind child to read or write is quite hopeless": in other words, that, considering the limitations of the elementary school course, "the game is hardly worth the candle" when other faculties, of more practical utility, may be cultivated.

The Method of Nature is the Archetype of all Method.

By MR. E. COOKE.

This Paper was part of the proceedings at the first Meeting of the Stockwell Branch of the Education Society, October 16th, 1878: in the *Bibliography of Children's Drawings*, Vol. VI., pp. 166-168. The first recorded Paper is either by Prof. S. Stanley Hall, 1891, or by Prof. Earl Barnes, 1893. In this Paper may be found the germs of many improvements in Drawing, based on Child-Development, now common everywhere, *e.g.*, Drawing with Colour, Brushwork, Drawing from Memory and Imagination, Snap-Shot Drawing, Drawing as Expression, etc. It may show that Child and Nature Study were not unknown as far back as 1860-70. In 1877, "Should the child be taught immediately from Nature in Drawing and Natural Science?" was discussed. The method of Nature and of Science were one, and these threw light on the teaching of Drawing naturally, through children's own drawings. Children were present, but it was not intended to give a model lesson, but to illustrate by their doings principles to be explained later, They and their drawings were facts to be observed, on which certain conclusions would be founded.

There were thirteen children present. Ages 5 to 12 years. Pencils and paper were provided and the children were asked to draw (1) whatever they pleased. This done, (2) a bird was selected for all to do. (3) Paint-boxes were produced and the children were invited to use them if they wished to colour the next drawing. This was an experiment hidden in a non-sense rhyme. The test of course was not mentioned to the children. All they heard was—

There was a man, a strange old fellow,
With a very red nose and a blue umbrella:
He ran about with a lighted candle
To try and find the umbrella handle.

This was repeated, and when they understood it they were asked to make a picture of it, and to use colours or pencils, or both, as they pleased in their drawings.

A short lesson followed to indicate methods of teaching. One of the children's drawings of a man was copied on the black-board, and the children were asked to criticise it. As each defect or error was pointed out it was improved, so that at last the drawing became a somewhat better representation of an old man running about with a lighted candle. The corrections suggested by the class were made by the teacher on the black-board drawing, as time was limited. But it was explained that usually the children would be allowed to make the corrections themselves, and after this revision a second attempt would be made then or at some other time; and interchange of thoughts in conversation and the attempts to improve the figure will help the child to realise its own ideas more clearly and to make its drawings better. Also one boy might be allowed to run about and to act the Old Man with his umbrella, while the others watched him. Or they might each try to embody the idea in action. This will help them to see, to feel, and to imagine what the drawings should be like. It will stimulate observation and help to form their mental pictures. To copy the drawings made by others should not be encouraged. Children should try to express their own ideas, however rude and crude their drawings may be: and they prefer to do so; errors, inaccuracies, and short comings can be pointed out and discussed without causing any ill-feeling. At first some children are very shy, sensitive and distressed. They shrink from exposing their drawings to others, even when they are really excellent. But when they feel that teacher and class sympathise with them, that all are trying to help each and each to help all, that they are not jeering nor sneering contemptuously at their strange productions but trying to understand and to help them, the shyness passes away. To develope the critical as well as the productive powers is necessary.

Another drawing was then made to get the action of the Old Man running about, from one of the children's drawings by the teacher. He began with a single line. This method was challenged later during the discussion by the teachers.

The subjects drawn by the children were: Box or Desk, 3; House, 2; Figure, 2; Mug or Jug, 2; Cats' head, 1; Boat, 1; Design, 1; A.B.C. on blocks, 1; Total, 13. The influence of the surrounding was apparently evident. The drawings are sometimes what the children thought they ought to draw, *e.g.*, Box. After the children left and the drawings had been examined, the paper was read.

Children generally are interested in drawing and painting. Almost as soon as they can hold a pencil they make strange arrangements of lines that are intelligible to themselves if not to us; and they select appropriate colours for the pictures they delight to paint. If they are brought up within the influence of art, if they see drawings made and are slightly and rightly helped or encouraged, their drawings soon become more definite, and when the young artist can draw shapes he can recognise he will often amuse himself with drawing them for two or three hours at a time alone. Has this early, this strong love of drawing in children, these attempts to express their ideas through form and drawing been sufficiently considered by teachers? Are there not powers latent in the child awaiting the educator, that are rarely drawn out or cultivated, and are therefore arrested or die away from neglect? Is drawing made the means of education it might be? Is it used as a means of expressing ideas, of drawing out thoughts? Are we not always working from copies, casts, or models? Rarely, if ever, do we try to get the child to express the ideas within it? "No one is really educated," it has been said, "until he can put into some form his fellows can understand the thought that is within him." This may be applied to children and the art student. And yet there is—so far as I know—no provision for this educational training in any existing system of drawing. "Go to nature," says the greatest and best of our teachers, and the student is led to understand that by it he must always draw from a model or an object before him—never from himself. He will probably be quite baffled if he is required to draw very simple things from memory or imagination, he will even think it wrong to try, and if he does try he will be so disgusted with his productions that he will easily believe that he should " go to nature." Only recently a Royal Academy student who draws the figure very well from a cast or from life, was required to draw a small figure in a position frequently seen in common work, but he could not. For such real " life " study he had received no training ; the power to copy or to imitate an object before him had been developed fully, while the power of expression had been left to die. Drawing from objects and from imagination should keep pace together ; they help each other. The power to express ideas will not be drawn out by copying or imitating, however laboriously the best work of the greatest masters, nor that of nature itself. Imitation of objects and expression of ideas each requires its own culture. The power to express ideas by drawing need not be lost. It exists generally. Children begin to draw so and it is natural, and might be naturally cutlivated.

That children naturally draw from within or from themselves is well known to all. To illustrate and verify this and other conclusions by experiment the children are here, that they might draw under our observation. We need a scientific basis of observed fact for our art teaching. To establish education on Science is the aim of this Society. For this we must notice the minds and ideas of young children, their methods and attempts to express themselves, especially by drawing.

To the educator children's ideas are of great importance. His business is to try and find out what these are, so that through such knowledge he is able to teach and to understand the child and to form his theories and methods of education.

Children's ideas are not ours. The beautiful head of Aphrodite in the Bronze Room, British Museum, is considered a work of highest art. A child who saw it recently said, " It is a horrid thing, it has no eyes, and its head is all broken behind." Children's ideas help or hinder our teaching. They often wish to draw the human figure and casts of parts of the face are frequently given them to copy. But children are sometimes pained and lose all interest in their work when they are given an eye, an ear, or a mouth to draw, separated from the face. " I don't like drawing pieces of a face," said one. " Nor do I," said another. Both had wished to draw figures, but they wanted the whole head or face, perhaps the whole figure. Children require whole objects at once, not pieces, but apparently only one object at a time. At this period when they object to parts of a face, if they have to draw two objects, one behind the other, they separate them and either place them side by side or probably one above the other. In their drawings the objects represented are isolated and are not related to the background, there is no background and no perpectives, and very but little respect for relations of size or space. If only the idea is expressed the young artist is satisfied. But the teacher is not. "Go to nature, imitate accurately but do not attempt to express ideas," he says, and in this way the natural impulses of the child are suppressed, for it wants to tell what it thinks to express its own thought, not to make a picture.

A lightly finished drawing of a little bit of mossy bank, by Mrs. H. Goodwin, was given to a boy to copy. Children we are told, should always have the best work put before them for imitation. Let us see what they make of it. In the drawing given new growths of hair-moss, club-moss, stags-horn, and lichen were covering the dead oak leaves and empty acorn cups of the past year. The new life was burying the dead past whose work was done. The moss was a mass, but the individual moss plants were clearly seen one behind the other. The boy simplified and reconstructed the drawing entirely and nature also. He separated mosses, lichen, oak leaves, and acorn cups from each other and placed them in one long tidy row, side by side, at regular distances and without a background. Evidently in him analytic and synthetic powers existed, but his analysis, composition and ideas were not like the artist's. Isolated objects are made very simple; sometimes figures are reduced to a few lines; not only are legs without knees and arms without elbows, but arms and legs in the earlier drawings have no width beyond the thickness of the line. There is a rounded extension for the head.

When mass or substance is represented, it is bounded by an *outline*. Form is limited by a definite line. All forms are at first drawn with lines.

If to the space enclosed by outline, colour is added, an even or uneven tint is all that is needed to satisfy the child. Colour is so delightful to it that "a box of paints and no complaints" is real happiness. Light and shade is rarely if ever noticed or represented. Colour is rarely unnoticed.

The nonsense rhyme was made and given to test and prove this conclusion by experiment. In the drawings made by the children here, there is no light or shade, the colour of the lighted candle is attempted, but not its light. The Old Man is not illuminated by the candle he holds. There are no cast shadows from the light. Many other experiments have been made with the same result.

Children do not draw from objects directly but from their own ideas. How they get ideas so unlike the objects represented is worth consideration. Of course, their ideas are from nature, but they are modified. Ask a child to draw any object in the room and he will probably not look at it nor draw it as it is seen from his position at the time, but as he already knows or conceives it. Children draw from memory and imagination not from objects directly, or if so the drawings are very inaccurate. The child grasps the whole clearly and draws it at once, not with little bits of line. These important statements should be verified. The subjects drawn by children are apparently things which interest them most —horses, ships, and trains, men and women, animals, cats, dogs, horses, birds. These are often in action. Men are fighting, horses running, birds flying, and trains moving. The teacher says: " You must not draw these things yet. You cannot possibly do them accurately, you must begin with simple things, a ball or a cube, they will keep quite still for a long time till you can finish them. Do it accurately. Finish one thing perfectly before you attempt anything else. Above all, never draw from imagination." So the effort of the child to express its ideas receives a death blow. The perfectly drawn ball or cube is beyond them and the suppressed child is afraid to attempt figure or animal or illustration again. These characteristics of the child's natural method of representing its ideas by drawing, may be briefly summarised.

Drawing is the child's natural means of representing or expressing its ideas.

(1) Simplicity of conception. The child makes difficult and complex objects simple, as wholes, and separates collected things.

(2) In his drawings he represents form by outline.

3. Colour is his chief delight, not light and shade, nor perspective.

(4) He draws from his ideas, more easily than directly from objects (memory and imagination are very sensitive and active).

(5) He is specially interested in human beings and in living things. He is most interested in complex living things and these in movement.

Compare these children's drawings with the earliest known specimens of Greek paintings on pottery in the First Vase Room, British Museum. What the nature art of Greece originally was is unknown. The earliest paintings 650—800

B.C., nearly back to the period of Homer, are compositions of animals, hunting, and battle scenes, interspersed with patterns supposed to be inaccurately rendered survivals of Egyptian signs and Assyrian foliated ornament.

(*To be continued.*)

Child-Study and Technical Education.

By MR. R. E. MARSDEN.

The teachers engaged in technical education have not yet supported the Child-Study movement to any appreciable extent. Probably this lack of support is chiefly owing to the absence of a true appreciation of its scope and its possibilities of usefulness. The ever-widening bounds of Child-Study seem to be a feature full of promise, and the time will surely come when the object of its investigations will include all the "seven ages of man," instead of being chiefly concerned with the first two or three. At present there seems to exist, among those who do not take the trouble to investigate the matter for themselves, an impression that "Child-Study" is contemporaneous in its scope only with early infancy; and the willingness and eagerness displayed by those chiefly interested in the first few years of life, in investigating the objects of their concern, is partly responsible for this.

It was in the nature of things that so much activity should be set in motion to discover, if possible, the true meanings that underlie the infant's early conduct, for upon its early experiences must, necessarily, be built the more mature conceptions of later years. Slowly, it has seemed to many, has the number of workers grown, and slowly has the subject been built up piece by piece, till now there is ready for those who will make it their own a fund of information that cannot fail to help teachers of every kind in their work. Technical teachers (whether they be scientific experts of our Universities or the instructors in our elementary schools) will find a fund from which they can draw according to their need. The younger the class of pupil it falls to their lot to teach, the greater the benefit to be obtained from a knowledge of what has been, and is being, done to understand the object of their training—the human mind.

The theoretical educationist—he who tells us what we ought to do, without always telling us how we can do it—has been largely left to tell the benefits of "Child-Study," and to those who are engaged in the practical work of teaching, his evidence by no means appears entirely unbiassed or conclusive, no matter to what eminence he may have attained. But there are many humble students of its methods who feel grateful for its help, and the writer is among them. In that best of all schools—the school of experience—has been learned the power that fore-knowledge has to increase what natural gifts one may possess, and to command the environment that shall train the growing mind. The feeling that one possessed theories based upon the observations of those who came into closest contact with the child has proved a rock to which to cling when the thunder of authority broke overhead, and the conflicting waves of opinion threatened to engulf the ship that had been so anxiously steered towards the harbour of success.

It has proved, beyond contesting, its usefulness when some new experience has been suddenly made manifest in the kaliedoscopic conduct that we try to weave into usefulness.

The teachers' natural line of re-action is shortened when theories are possessed which instantly suggest a line of conduct, even though they sometimes err when put into practice. There can be no greater sustaining force when events,—as they sometimes will,—frustrate the best efforts than the knowledge that good work is being done in spite of the unsuccessful appearance on the surface; and the dull moments will be fewer and farther between if a healthy perennial interest, such as can be cultivated by the methods of "Child-Study," pervade the mind. With increasing knowledge comes that broader and deeper sympathy that proves of inestimable value to a teacher, no matter with what class of student it may be his lot to deal.

Many of the students who come to the Polytechnics and Technical Institutes for the first time very much resemble the elder boys in our elementary schools. In fact, beyond that they have left school so many years ago, and have had an experience which teaches them the value of knowledge, they may almost be regarded as schoolboys. To be successful with this class, it is eminently necessary that the state of the student's mind should be fairly well comprehended, and no amount of purely technical knowledge can show how such are to be trained. As with all education, much of the most valuable work, as far as the production of students is concerned, is done among these elementary and, sometimes, dull and backward pupils. Often from among these it is possible to find a few who, by their much-prolonged power to develop, ultimately outrace those to whom more brilliant talents have been given. It is among such that the teacher, versed in the methods and aims of Child-Study, finds the greatest use for his knowledge, and there is no doubt that much teaching effort is wasted in Technical schools owing to teachers often lacking the most rudimentary acquaintance with the processes of the mind, beyond that acquired by a few moments of occasional introspection.

Often has the theory of "arrested development" enabled the weak spot to be found. Nevertheless, even "arrested development" is often accompanied by the power to attain a valuable height of efficiency, should the environment provide that which favours development along its natural lines. Human activities are so much alike in their essential qualities—whether in the child or in the man—that the history of their growth from the commencement affords the only true light that can be thrown upon the ways and means of furthering their development. As a body, the technical teachers have, perhaps, had less training in the methods of education than any other class whose duty it is to impart information: their superior technical skill and experience makes them thorough masters of their subject, and their students listen to them with minds akin to their own; but these advantages do not prohibit them from increasing their natural powers as teachers, by enlarging their knowledge of the wide field of information that hides its value under the simple and much-misunderstood name of "Child-Study."

Suggestions for Individual Child-Study.

By Dr. E. A. Kirkpatrick.

I.—*Physical Characteristics.*

1. Size of child for his age.
2. Health.
3. Evidence of, or freedom from, nervousness.
4. Characteristics of attitudes and movements.
5. Condition of eyes and ears.

II.—*School Work.*

1. Work as compared with average of his class.
2. Success in different subjects.
3. Chief merits, or defects, as a pupil.

III.—*Life outside of School.*

1. Character of his home.
2. Occupations outside of school in the way of studying, reading, working or playing.
3. Characteristics shown outside of school different from those in school.

IV.—*Mental Characteristics.*

1. Ability, quickness and accuracy in perceiving, imagining, remembering and reasoning.
2. Emotional characteristics as manifested in fear, anger, jealousy, bashfulness, pride and interests.
3. Effect of praise and blame.
4. Character of attention—reflex or voluntary, continuous or intermittent—intense or slight.
5. Actions—impulsive or deliberate.
6. Persistency, or lack of it, in working. How best appealed to. What is needed most—stimulation, repression or direction.
7. Evidence of his tendency to lead or follow and imitate.

Child-Study for Teachers.

BY MISS MARY LOUCH.

Child-Study.

In a recent pamphlet, *What is the use of Child-Study to Parents?* Child-Study has been defined as "An enquiry into the nature of children, body and mind, so that we may understand them better and give each child the best possible chance of becoming what it might become if not hindered by traditional and conventional curbs, and if all its best powers had a chance to grow." But this definition is too narrow, for Child-Study is a study of the human being in all his physical and psychical aspects at all stages of his development.

Knowledge versus Ignorance.

Such a study has special value for those whose life-work is to educate ; unless one knows what has gone before and what is to follow in the way of development one can only very inadequately understand the "school-age." Of all stages of development the *growing* age of youth is most critical, a slight impression really made on the growing mind or body increases or emphasises itself beyond anything we should consider probable ; therefore ignorance of child-nature during the period of rapid growth is a source of great danger both to the individual and to the community, and is productive of causes of bitter regret to earnest men and women responsible for education. The most lamentable and dangerous ignorance of all is the belief that we know all that there is to know, a form of ignorance which may belong alike to those who rely entirely on personal experience. and to those who think they can know by merely appropriating the experiences, however systematically organised and clearly expressed, of other people. A combination of personal experience. with knowledge gained from experts in the various sciences involved in knowledge of Child-nature is stock-in-trade well worth having, if for no other reason than that it convinces us how little we really know, and engenders in us humility and patience in the face of the unknown, reverence in our treatment of children, and diffidence in rudely interfering with nature's processes. Few will now be found to make such a foolish objection as the following, viz :—that very much knowledge of the children to be taught is embarrassing to a teacher: that in a class children are so various it is impossible to accommodate oneself to all, therefore if one makes the environment as good as possible, and brings before children "the best thoughts of the greatest men," and disciplines them in ways hitherto found successful, so that they may learn to make efforts, one has done all that can be done and the rest is best left to the invisible and unfathomable process of nature. To this one replies : What *is* the best mental and social environment for children ? Do both sexes, children of all ages and of all degrees of capability, demand the same ? The criterion of a good environment has in the past generally been its suitability for the grown up people who plan it, but children differ from adults more than is usually supposed. They are physically so different that were it possible to magnify the body of a baby to the size of a man the creature resulting, compared as a man with other men, would be judged a deformed monster, and his physical condition would be diagnosed as diseased. In mind the case is even stronger. Imagine a full-sized man; with all his full-grown strength, acting, thinking, speaking as a boy of five; he would be considered imbecile. Yet when education above the Kindergarten stage begins, the child is treated, with few slight exceptions, as if he were, indeed, a little man with the same instincts, interests, and powers differing only in degree of development. As to "the best thoughts of the greatest men," we need to know what is the highest and best that can be taught at various ages, and to save the time and energy we waste in trying to feed children with mental food they cannot digest. And lastly, as to "leaving the rest to the invisible and unfathomable process of nature," in what other department of work do we prefer darkness to light? Why should we court it or even tolerate it in this the most important work of all?

Pestalozzi and Froebel were some of the greatest child-students the world has ever seen; we may rightly regard them as leaders in the Child-Study movement. We do well to study their writings, chiefly on account of their insight into child-nature; but the torch which they handed down burns with considerably more enlightening force to-day for the contributions which have been made by modern investigators in Germany, America, and elsewhere—a light which is beginning to shed its rays most evidently on Government conclaves, the elementary schools of our nation, and the lecture-rooms of our Universities. No reasonable teacher can deliberately refuse to see what this new light reveals. Experience and sympathy can scarcely be too highly estimated; but the whole of the teacher's career is not sufficiently long for him to learn all he ought to know about the children of various types and ages who come under his influence; and sympathy with the unknown does not exist; an atmosphere of general benevolence is pleasant, but it is not sympathy, and must not be mistaken for it. Knowledge and sympathy re-act on each other to the increase of both.

Child-Study for the Teacher.

But Child-Study associations have not been formed only for the purpose of propagating knowledge of child-nature, but also for enlisting a great army of workers in a rich field of research, for stimulating those who have to do with children to personal study, and to give them guidance in trying to solve some of their own problems for themselves. Even in the daily routine of class-management there are so many things we ought to know, and want to know: What attitude do children naturally take up toward certain problems of life, life as they know it in the school-room, play-ground, home? What are the highest motives to which we can appeal at five, ten, or fifteen years of age? What are their ambitions, ideals? When do they begin to look far enough ahead to have ambitions? When are they sufficiently interested in their own "conscious making" to have ideals? How far, and why is their perpetual movement to be tolerated, checked or encouraged? What are the limits of child endurance? What are the causes and effect of fatigue? Ought children to be inured to fatigue since fatigue is an inevitable condition of later life, or is it an unmixed evil? What are the child's instincts or natural tendencies: what will he do without help or incitement? What activities belong to his age or are injurious to it? What powers has he which are being neglected? What are the natural pleasures, desires, tastes, interests of children of such or such an age? These and a hundred other similar questions we, as teachers, ought to get answered, but life is too short and our insight too feeble for us to answer many of them, even inaccurately, from our own observation. Let us hear what others have to say who have given years of study to, perhaps, only one of the problems, and if our needs are not satisfied by their statements we may, at least, gain suggestion, food for thought, something to make us see more clearly with our own eyes.*

The Effect of Child-Study on the Teacher.

If consorting with Child-Students does not bring all the knowledge we once hoped to get, if much that is put forth under the head of Child-Study is considered to be unpractical and futile, yet we believe that to everyone who has taken some active part in Child-Study, or even only sat at the feet of its apostles, has come an attitude of mind which raises a teacher to a higher plane of thought, gives a broader outlook on his work, and a more tender, sympathetic interest. He learns to see some childish fault, or inconvenient ways and irritating tricks as phases, natural stages or persistent survivals soon to be outgrown; others he knows to be the perversion of, or the beginning of better things. Greater knowledge makes him patient; troublesome children who upset a class by their aggressive personality become objects of interest; the "stupid" child almost ceases to exist, for, instead of stupidity we see arrested development or physical obstruction, or some other cause of so-called "stupidity" which it is now his ambition to remove. He is quicker to recognise characteristics, and the children are equally quick to respond to the inexpressible relation which has been established between the teacher and themselves.

The teacher's attitude to parents is also changed by the common interest that he and they alike take in some particular child, and the common work they are engaged in for his benefit. If teacher and parent have attended some lecture, or taken part in some discussion which each felt threw some light on the child who is their mutual care, how unlikely it is that they could regard each other as having "conflicting interests"!

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* For a summary of the methods in use in the study of children I would refer students to *Studies in Education*, by Earl Barnes.

Child-Study makes the children we teach become the centre of our highest thoughts and strongest interests; our work becomes our "hobby," in which we feel there is no need to put bounds on our enthusiasm, for what can be more worthy of the devotion of a life-time than humanity at its most interesting stage, buds in the act of unfolding and revealing their best, human children, none the less lovable because "other people's children"?

Any persons wishing to join a Branch of the British Child-Study Association, or to form a new Branch, are requested to write to the General Secretary—(Miss) Mary Louch, Colbury House, Totton, Hants.

The Organisation of New Branches of the British Child-Study Association.

By Miss Mary Louch.

At a recent conference of this Association a gentleman in the audience, who had not previously attended any of its meetings, stood up and said: "There ought to be a Branch of this Society in every large town in England," and many endorsed this remark. Why? Because more extended and definite knowledge of Child-nature than we at present possess is the only sure basis for improvement in our educational system; all discussions on hygiene and infant mortality are futile without it, and promoters of all reform movements, beginning as all reform movements do, with the young, feel their need of it The warm response which comes so readily from men and women of all classes and interests when this subject, with all its possibilities, is unfolded by one who understands it, justifies us, the Council of the British Child-Study Association, in thinking that the time is ripe for pushing on the work of extension much more vigorously than has hitherto been done. There is now a comparatively large literature of Child-nature from which much information can be gained, independently of lecturers; we have a constitution and local rules which are satisfactorily standing the test of experience; we have as our officers men and women of repute who are not likely to let the Association wander very far away from the paths of sober common-sense. We venture, then, to take up extension work with confidence and vigour, and to offer suggestions to those who would set to work to form a new Branch if they knew how to begin, and if they were certain that the small amount of leisure they have at their disposal for the task could be used to the best advantage.

First, there must be at least *one* person in the place where the Branch is to be established who is an enthusiastic lover of children, and entirely convinced of the usefulness of enquiry into Child-nature. From this one person enthusiasm will spread. He (the pronoun is of common gender) can obtain prospectuses from the General Secretary, and pamphlets, specially written for propaganda work: *What is the Use of Child-Study to Parents?* and *Child-Study for Teachers* (price One Penny each), also back numbers of the magazine which is the organ of the Association, *The Paidologist* (price Sixpence, without postage, published by Messrs. Norman, Sawyer & Co., Cheltenham*), and these he should distribute as widely as possible among people likely to be interested. Next a preliminary meeting should be arranged, open to all, and a thoroughly good lecturer, one well versed in the subject, should be secured to address the meeting. On the nature of this lecture everything depends. At this critical juncture no pains should be spared in securing the right person. The lecturer would probably need to have all expenses paid, but would give his lecture free. After the lecture, opportunity should be given for asking and answering questions, and then, before the meeting closes, people willing to become members should be invited to give their names and addresses to the convener of the meeting. It is well to be able to give intending members some idea of what the subscription is likely to be; it varies generally according to local expenses from 2/6 to 3/6. As the number of members increases the subscriptions can be decreased. The price of the magazine, which is the organ of the Association, is at present 1/6 per annum, with the additional cost of postage, and a half-crown subscription is often found sufficient to cover the cost of the magazine and local expenses. After the shortest possible interval, those who gave their names as likely to become members should be summoned to a business meeting, which should be conducted formally, a chairman being elected, and all resolutions proposed, seconded and voted upon. At this meeting the President, Secretary, Treasurer, and a small committee, with power to co-opt, should be elected. If these officers can at once be elected, and are present at the meeting, the constitution of the Branch can be passed at once, and thus save the trouble and expense of another meeting. By previously applying to the General Secretary the local rules of other Branches may be obtained, and those found most acceptable could be used as the basis for the rules of the new society, for each Branch of the B.C.S.A. is at liberty to make its own by-laws, provided they do not conflict with the general rules of the Association, as published in the general prospectus. The Committee will next have to draw up its programme of work, *i.e.*, lectures, readings, etc., for three, six, or twelve months, as found convenient. It should be pointed out to intending members that no responsibility is involved beyond the payment of the local subscription, and no work is necessarily entailed. If the new Society wishes to become a Branch of the B.C.S.A. the Local Secretary should write to the General Secretary for a printed form of application for affiliation, and before returning the same, filled up, to the General Secretary, the Society should have elected a delegate (one, if the number of the members of the new Society is less than fifty, two, if the number exceeds fifty) to represent it at the Council Meeting at the Annual Conference, generally held during the first fortnight in May. Affiliated Branches pay a yearly capitation fee to the central fund; the fee is generally 2d., and cannot exceed 6d. per member. Most Branches hold meetings during the autumn, winter and spring only; and evening meetings are generally found more successful than afternoon meetings.

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* For large quantities of back numbers of the *Paidologist*, at reduced prices, for propaganda work, application may be made to the Editor of the magazine.

Reading Circles are a valuable supplement to a Branch, especially to a new one. The organisation of Reading Circles, the formation of a local Library, with information about the existing central Child-Study library, together with suggestions for suitable literature for reading-circles, will form the subject of another pamphlet.

Correspondence.

TEACHERS FOR SOUTH AFRICA.

SIR, *To the Editor of the "Paidologist."*

In consequence of my having visited South Africa of late, and of having seen something of the state of affairs, I have been asked by a leading member of the South African

Colonisation Society to do what I can to make known the educational wants of these colonies, and the efforts the Society is making to cope with them.

Their Education Committee acts as an intermediary between :—

(i.) Teachers in Great Britain desiring posts in S. Africa.

(ii.) Government Departments for Education, or private employers, in S. Africa.

The Committee invites communication and co-operation from :—

(*a*) Principals of Training Colleges or other educational bodies, and qualified teachers of all sorts in Great Britain.

(*b*) Officials and private persons in S. Africa who require the services of first-rate teachers.

There is a growing demand for qualified men and women teachers, both elementary and secondary, as well as for trained musicians, private governesses and technical teachers; also typists and short-hand writers are sent out through this Committee and should apply in the same way.

The following Educational Authorities have expressed their approval of these objects, and have consented to give the benefit of their advice on points of special difficulty:—Sir W. R. Anson, Sir R. C. Jebb, Sir H. Craik, Mr. Oscar Browning, and Mr. H. T. Gerrans.

Over so wide a field—comprising the greatest part of the continent south of the Equator—it would be misleading to generalise as to conditions of service and emoluments, but full particulars can be obtained from

The Education Secretary,
South African Colonisation Society,
47, Victoria Street,
London, S.W,

whilst applications respecting Scotch Teachers should be addressed to

The Scottish Representative on the Education Committee,
South African Colonisation Society,
42, Frederick Street,
Edinburgh.

As to the need for experienced teachers and the importance of the work—both from an educational and an Imperial point of view—no doubt can exist in the mind even of the most cursory visitor.

Naturally, the conditions of climate and of life in S. Africa vary enormously. This is evident as one glances at the map and sees the names—Cape Colony, Natal, The Transvaal, Orange River Colony, Rhodesia and the South African Protectorates. Herein a location can be offered which would suit every taste!

As to the strenuousness of the people and their hospitable instincts, surely every member of our late expedition can do no other than speak well of these.

I am, Sir,
Faithfully yours,
J. O. BEVAN,

Member of the General Committee, and of the Sectional Education Committee of the British Association for the Advancement of Science.

Chillenden Rectory, Dover,
Nov. 14th, 1905.

The Library.

Report of the Educational Research Club, Hartford, Connecticut.

This organisation was founded as the result of a course of Lectures given by Professor Earl Barnes, in order to investigate practical and unsettled questions of school work. The plan was to collect and tabulate reliable data, and ascertain what conclusions can be drawn from such. The following enquiries in November, 1904, were sent out to the various schools represented in the Club, replies to which were given by 3,994 boys and 3,880 girls, from eight to fifteen years of age: "What school subject do you like best?" "What school subject do you like least?" The results were classified and charted, and, summarised, are chiefly as follows.

Mathematics is the subject of chief interest with both teachers and pupils, and this result corresponds with a similar investigation conducted by Professor Earl Barnes—the dislike for it that exists in the lower classes disappears, and it becomes of chief interest in the higher part of the school. Manual training, though girls care for it less than boys, is also extremely popular, and the percentage of dislikes is small. History is liked by the boys in higher classes especially; physiology and hygiene are very unpopular with teachers and pupils; geography is not popular with boys or girls; the girls care more for the language group of subjects than the boys, and nature study, drawing, and music excite little enthusiasm from either boys or girls. The subjects that the teacher liked best to teach are also those that are liked best by the pupils, and the subjects unpopular with the pupils are also those that are least cared for by the pupils.

These results are not what one would have expected in some of the cases. The popularity of manual training is explained by the native interests of the child, the impulse to physical activity, the interest in producing something that gradually grows under one's hand, the success of which can be tested and compared, but drawing, for some of these reasons, should occupy a higher place in the children's favour than it does. Geography and nature-study again deal with matters of supreme interest to children; plants and animals always appeal strongly to them, and foreign peoples and scenes excite the imagination and the wonder instinct in children. The dislike of physiology and hygiene is explicable; most children are only conscious of their bodies as the ready servants of their will, the minister of delight in bodily activities, as jumping, running, etc. Full of the adventurous spirit, reckless of every present risk, they court danger in their play activities constantly—how, then, should they find pleasure in hearing of the necessity of guarding against sickness and accident?

The popularity of mathematics is accounted for in the report by the definiteness of the subject and the possibility of exactly measuring the results, and there is no doubt that this is the right reason. This would allow for the working of the spirit of rivalry, strong in the schoolroom as in the playground. The report suggests that poor teaching may explain unpopularity in certain subjects, as geography, literature, physiology. Certain it is that good teaching in these subjects, as the report hints, calls for a richer mental content on the part of teachers, more careful preparation for lessons, and a certain amount of illustrative appliances. The report shows what teachers can do and are doing in some parts of the world to understand the problems that their work offers for solution.

S. Y.

Educational Review, New York. May and June, 1905.

In the May number are papers prepared for the Teachers' Association of Harvard.

It is commonly supposed that the high school in America is the continuation of the elementary school, and that pupils can obtain a graduated and unbroken course of instruction through the elementary and high schools which will take them to college. Two articles in this number seem to indicate that the transition from the primary to the high school is too abrupt, and recommend a more complete approximation of the upper part of the elementary school to the high school. In the first of these articles Mr. Stratton D. Brooks urges that some of the methods of instruction, study, and discipline which are now more prevalent in high schools than in elementary schools shall be introduced into the elementary school, together with an extension of the curriculum of the latter by the inclusion of some of the high school subjects. In this way the pupil who is to proceed to the high school will have more knowledge, better habits of study, and greater self-reliance. The writer discusses the feasibility of extending the high school name so as to include the two upper grades of elementary school, but suggests the possible danger of lessening what is now considered as a reasonable minimum of education, the completion of the eight grades of the elementary school.

In the next article Superintendent Charles H. Morse considers the practicability of such a six-year-course for the high school, and affirms that it is possible in most cities of moderate size to extend thus the influence of the high school without having all the classes under one roof.

Another article in the May number is entitled " Departmental Teaching in Elementary Schools." This article gives the results of a change in the systems of instruction introduced recently into many of the schools of the city of New York. According to this change, the teachers are teachers of subjects rather than instructors of one class or grade—in other words, the specialist teaching common in high schools has been introduced into the elementary schools.

It is a little difficult to understand whether this plan of instruction has been made operative with the lower as well as the higher classes of the elementary school. In any case, the writer claims that nothing but profit follows from the change of plan—a whole list of advantages is quoted, among which is that the specialist teacher, being an expert in his subject or group of subjects, gives more efficient instruction, can create greater interest in his branch of study, and provide more effective appliances than the teacher of many subjects. One of the chief advantages claimed is that more independence and self-reliance are fostered in the child who is instructed by several teachers than in the child who is taught always by the same teacher. The latter is more likely to do far too much for the pupil, thus lessening personal initiative and responsibility. This might be granted in the case of the elder pupils, but in the case of the younger ones it would seem to throw upon them a burden of self-control for which they are not ready. The article, besides detailing the advantages that have been revealed in the working of this plan, answers criticism that have been alleged against it, and shows what conditions experience have shown are necessary for its successful working.

The June number contains an article by Professor W. S. Jackman, entitled "Nature-Study and Religious Training." The writer affirms that a breach that ought not to exist in any organic education has been made in the schools by the separation of religious and secular training. Nevertheless, the error cannot be remedied by the restoration of Bible reading of the old type into the common schools. Rather is the future moral and religious training of the younger generation to come through Science. Science now recognises the existence of a spiritual life, and it is in the study of Nature that we shall find the deepest roots of the highest moral life. It is for this reason, Professor Jackman urges, that Nature-Study should be introduced into the Sunday schools, and should be given a paramount place in the Day schools. The doctrines of morality that in future shall govern our ethical training of the young will rest upon the great generalizations of Science, that nothing happens through whim or chance, not even the seemingly capricious conduct of human beings. Geological records tell how apes and tigers are at last overcome by their own methods of cunning and cruelty, and Science itself proclaims the law of love. At present, as the conditions of the mass of individuals in our great cities testifies, Science has as yet ministered to the material, intellectual, and moral life of a few, and only incidentally benefited the majority. Imbued with the new religion based on Science, every man will become a saviour of the weak and the needy, and the religion that is the outcome of the study of Nature will find expression in a higher level of conduct.

S. Y.

Suggestions for the consideration of Teachers and others concerned in the Work of Elementary Schools. Eyre and Spottiswoode. 155 pages. 10d.

Teachers are invited to treat what is in effect an official handbook of educational theory and practice as "an aid to reviewing their aims and practice, and as a challenge to independent thought." This little book certainly affords opportunity for the attainment of both these ends. In reading it, one is first impressed by the distance, not so much in time as in educational aim and policy, that separates present day administrators of education from those who inaugurated the evil system of payment by results. In truth, to teach according to the ideals and counsels laid down in this document is a far more difficult task, and requires far more self-denying effort than to secure a uniformly high standard of attainment in the three R's throughout a school. The latter was the goal of a past generation of teachers, because the authorities would have it so. Teaching was thus reduced to a base mechanical craft, deadening in its exercise to both teachers and taught. According to the ideals in this pamphlet, issued by the Board of Education, teaching is an art which calls forth all the intelligence, energies, and resources of thinking men and women.

The results of the child-study of the past ten years are seen in the recognition of differences of physical capacity in children of varying ages and circumstances. Any formal instruction for children under five years of age is deprecated, while in such school activities as writing, needlework, and drawing, teachers are cautioned against all aims and methods which emphasise the inculcation of habits of personal hygiene that shall impose strain upon the rapidly-growing bodies of children of the elementary school period. The all too-frequent and pernicious practice of requiring children to sit with their arms folded behind or across their chests is condemned as "highly objectionable." The postponement of the teaching of reading to a later stage than is usual is recommended. There is also a sound psychological basis for the counsels in the children during the first years of school life, while it is suggested that formal instruction in the laws of health and temperance should be deferred to the last two years.

The pioneers and supporters of the Child-Study movement will rejoice to find that it is expressly affirmed that in the period of early childhood the principles of teaching are to be sought in such well-known characteristics of children as love of movement, responsiveness to sense impressions, curiosity, and imaginativeness. This is to give an altogether different idea of Infant School work to that of past years. We feel, also, the difference between past and present ideals of primary school education when we read that reading and writing are not to be regarded as ends in themselves. This way of regarding the instrumental subjects is a survival of the Payment by Results system, as is also the over emphasis placed on very neat written and arithmetical work. Extreme accuracy in arithmetic and extreme neatness in written exercises are easily recognisable, and tested results of teaching efforts, and too high a premium has been placed on them by many teachers and inspectors. A better sense of proportion is seen in the place assigned to these school virtues by the writers of this pamphlet. We read: "To insist upon the very best handwriting when a piece of composition is being done is obviously wrong." "The most fertile cause of waste of time and abstraction of attention is the use of the ruler in setting out arithmetic." "It is quite possible for scholars to have been trained to admirable accuracy in reading, writing and arithmetic, and yet to be almost incapable of learning anything that has not formed the subject of a lesson." Advice is given on the training of pupils to habits of study and the use of a book as a means of getting information, while in the upper classes the reading lesson is regarded as an education in the appreciation of what is of literary merit. Nothing in the whole book is more valuable than the emphasis laid upon the training of children to a ready and accurate use of the mother tongue.

Every part of a curriculum not too extensive for the elementary school, and which considers equally the social necessities and the interests of the pupil as a human being, is in turn dealt with, and though exception may be taken to details, there can be no doubt of the sound educational principles underlying the whole. Co-ordination of the different branches of instruction is recommended, but within natural limits.

Everyone who knows anything of the conditions of elementary school work will feel that one of the chief difficulties in the adoption of many of the counsels is the large size of the classes. It is recommended that more use be made of the plan of breaking up large classes into groups where one section is occupied in study while the other is receiving a lesson. In this way more individual attention to pupils can be given, and habits of self-help are promoted. It must, however, be admitted that this plan is more easily adopted in the upper classes, while the largest classes in the school are generally the lower. S. Y.

Moral Education By EDWARD HOWARD GRIGGS. London: Gay and Bird, 1904. pp. 352.

This is the most serious attempt so far made in the English language to deal with the whole problem of Moral Education. In his introduction the author says:—"My aim has been sanity and novelty," and this aim has been well realised. The chapters deal with Unity of Moral Life; Moral Education Through Work; Moral Influence of the Social Atmosphere; The Nature and Function of Corrective Discipline; The Relation of Moral to Religious Education, and similar subjects. From the treatment of each of these subjects, and also from the foot notes and the fifty pages of carefully annotated bibliography, it is clear that Mr. Griggs is not only widely and intimately acquainted with general philosophy and educational theory, but also with the social sciences and with the most recent psychological investigations. Of the two great schools of educational theory it is clear that the author belongs to that which seeks guidance from a direct study of human desires and interests, but the philosophy of the work is decidedly eclectic.

The book seeks to aid parents and teachers in relating children to the natural, social, economic, artistic and religious life around them in such a way that their lives may be worth while to themselves and to others. In every chapter life is considered as a whole. Something of Mr. Griggs' point of view may be gathered from his statements that "Children pay their way as they go." "The child does more in educating the parent than the most devoted parent can do for the child." "The child is a missionary to fallen humanity." It is a very helpful book. EARL BARNES.

Fatigue. By A. MOSSO. Translated by MARGARET DRUMMOND, M.A., and W. B. DRUMMOND, M.B., C.M., F.R.C.P.E. London: Swann, Sonnenschein & Co. Ltd., 1904. pp. 334.

This little book contains a considerable amount of information on cerebral and muscular fatigue, although the author adds that he has by no means exhausted the subject. The first three chapters deal with the migration of birds, the history of the study of the movements of animals, and the origin of the energy of the muscles and the brain. In the fourth chapter allusion is made to the different instruments invented by Helmholtz, Ludwig and Marey for registering the contraction of muscles, and the author then describes the ergograph, or register of work, which he had invented, composed of two parts, one of which keeps the hand fixed, while the other registers the contractions. The first phalanx of the middle finger of the hand is introduced into a strong loop of leather, and to this is attached a string which sets in motion the registering apparatus. The contractions of the middle finger which follow the rhythm of a simple pendulum marking the seconds, by means of a cord attached to the finger raise a weight of three or four kilogrammes, and the movements are registered on a smoked cylinder. The length of the contractions gradually diminishes, until the muscles, through fatigue, are no longer able to raise the weight, and thus a curve of fatigue is formed. By means of this curve we can read the characteristic difference shown by different individuals in their resistance to work, and so by means of the ergograph we can see the manner in which fatigue is caused. With this instrument various observations have been made on school children, the time at which they can best be pursued, and the best way of dividing the day as regards play and work. The products of fatigue, *leucomaines*, are described, and so are different diseases resulting from muscular contracture and rigidity. The law of exhaustion, according to the author's assistant, Dr. Maggiora, is that work done by a muscle already fatigued acts on that muscle in a more harmful manner than a heavier task performed under normal conditions. In the ninth chapter the phenomena characteristic of intellectual fatigue are described; and in the tenth, which deals with lectures and examinations, the experiments demonstrating the relation between cerebral and muscular fatigue should have an effect on school curricula. No games or athletic work should be pressed upon children during the time when examinations are being held, or when there is any special intellectual work to be done. The signs of over-pressure are shortly described, and there should be included in these various nervous disturbances from which these over-strained children suffer. Dr. Ballantyne's theory that the ideal school should divide the time of the children equally between work and play is mentioned, and also Charles Paget's experiment, in which one class continued to work on the old lines, and the other divided its time between work and play, with the result that at the end of the session the latter surpassed the former in every way. There are many practical questions touched upon in this little book, and it should be in the hands of every teacher, who would then be able to apply the theories advanced in it to his daily work. The translators have done their work well, and the interest of the book is increased by the numerous illustrations which appear in it.

F. B.

Technical Education in Evening Schools. By CLARENCE H. CREASY. xxiv. + 309 pages. 3/6. Swan, Sonneschein & Co.

Within the limits laid down in the preface this work exactly states the present position of Evening Technical Education. Members of all authorities having in any way to deal with the problems that must be solved before a successful scheme of Technical Education can result would do well to read this work. It is undoubtedly true, as urged herein, that much money and more effort is every year thrown away owing to lack of co-ordination among, and organisation of, the various evening schools. The importance of evening work is often underestimated, especially by those who judge the work from what they have seen of classes thrown open indiscriminately, without fee, to all comers.

The best work can only be done among those students who are willing to sacrifice both time and money in a real desire to profit by the instruction. The students who frequent our evening schools are of all degrees of capability, besides varying very greatly in their elementary education, and having requirements as diverse as their present stock of knowledge. Add to this the fact that attendance is purely voluntary, and success often without any immediate encouragement, then the difficulties that surround the evening school teacher will be seen to be sufficient for any stout heart to strive to conquer. Whatever may be true of other towns, London certainly suffers from lack of organisation in her technical education, and as the schools and institutes multiply this will only cause a greater waste if it be not taken well in hand.

At present happy is the school that can lay down courses which the students must pursue so that their effort may be of the utmost value. For, should the authorities be wise enough to thus set a bar against spontaneous unco-ordinated studies on the part of the student and make any course compulsory, away go many of the students to study the prospectus of a neighbouring school where no such limitation holds. With proper organisation and co-ordination among the various schools, there is no reason why schemes, elastic enough to suit varying capabilities and requirements, should not be instituted and thus ensure more solid work.

The multiplicity of certificates could give way to a diploma of some real practical value, awarded to those who had by patient and prolonged study made themselves of value in the industrial world. Among other questions dealt with in the book is that of the training of technical teachers, and here we are yet a long way from the millenium. The brained technical teacher, if the term be limited to mean instruction in the theories of teaching and other subjects which may he termed the mechanics of education, is the exception rather than the rule. But in our evening schools the receivers of technical education are nearer akin to the teachers in mind, and so the difficulties of presentation are somewhat lessoned.

Nevertheless, there would be a hearty welcome to a series of lectures on the art of imparting knowledge, as suggested in this book. Technical teachers, in common with their professional brothers, are always ready to receive anything that they believe can increase their powers. R. E. M.

Hand and Eye Training: Its Principles and Methods. By H. Holman, H.M.I. Clarkson and Griffiths. 110 pages. 1s. net.

In these days of cheap binding all books that have even a pretence of lasting value ought to be placed between cloth covers. The bookshelf, the library table, and the pocket are alike unkind to the paper covered work, no matter how great its intrinsic value; and here, certainly, is a book which will be considerably handled by those who are sufficiently interested in hand and eye training to obtain it.

With the principles and methods so clearly and simply enunciated in its pages all who have studied the modern trend in education will agree, as they also will with the statement that "teachers ought not to be afraid to let their pupils take the chances of failure, under proper safeguards. . . . The worse the work is, as to finish and even accuracy, so long as it is the best the learner can then do, the better for the teacher; because it reveals to him the faults and weaknesses of his pupil, and thus shows him what, and how much, still remains to be taught. He is a very ignorant teacher who resents, instead of welcoming, the honest failures of his pupil. 'Show me thy faults that I may be thy teacher' should be his motto." Teachers would, no doubt, be only too pleased always to welcome "the honest failures" of their pupils, if such were not sometimes pointed out to be signs of their own failure, honest and otherwise, as well.

While the length of the lessons may be judiciously limited to thirty minutes for paper modelling in the lower classes, the higher limit of forty-five minutes, mentioned in this work, is altogether inadequate for the wood-work or metal-work lessons of the upper standards. Contrary to what is stated, the interest does not flag even after a whole morning or afternoon spent at wood-work, and body postures are being continually changed in the execution of the various tool manipulations required to carry through even a simple model. The type of lesson given on page 85 and again on page 87 is being quickly eliminated from manual training, owing to the dissemination of the methods and principles that underlie the work when it has its real educational value.

The various systems at present in vogue for hand and eye training suffer from the want of correlation, and from the fact that the pupils, in most cases, have not had their early training of the Kindergarten carried upward through the standards till they are fit for manual training in the form of wood-work.

Among the *obiter dicta* these are to be found: "The scholar who cannot do without his schoolmaster has a bad one," "The true teacher is a maker of men·" This latter, together with Carlyle's dictum, "The end of man is an action, and not a thought, though it were the noblest," are sufficient to justify the inclusion of hand and eye training in every scheme of early education. R. E. M.

The Pedagogical Seminary. Vol. XII. No. 2.

Four articles here should be read by teachers: "A Study of Children's Interest in Flowers;" Pedagogical Arrests and Peculiarities;" "Dynamic Biology in the College;" "The Hygiene of Home Study. The first is based on a *questionnaire;* as this is not given it is difficult to discern the full scope of the investigation. Replies were drawn from 433 children, and these reveal a strong animistic attitude for flowers lasting, even amongst public school educated children, to about twelve years. They constantly ascribe to them pleasure and pain, mental and moral traits: "Children think the flowers talk, in a third of the returns: here, also, a slightly larger percentage of girls." Surely, if this is the way children naturally approach plant life, the school should delay dissection and analysis until this stage is outgrown.

The second article describes an investigation bearing directly on educational methods, and also pointing in the direction of a more naturalistic educational course in the early school years. The evidence has been gathered gradually from adult college students; it is of a kind which suggests comparison with Sir F. Galton's "Enquiry into Human Faculty." The arrests most frequently mentioned were induced by prolonged visualising or drill exercises: "mapping," counting in with objects in arithmetic, memorising in history, diagrammatic analysis and word building in grammar. "Over zealous drilling to secure thoroughness in any period fixes the child's mode of thinking at that level of development." The second part of the paper deals with cases of arrest that appear to have followed on too early ripening of certain faculties: "Two periods of arrest seem most prominent, the first from seven to uine, the other at about the age of adolescence."

"Dynamic Biology" is the second of two papers (the first of which dealt with Biology in the High School) by Dr. C. F. Hodge, of Clark University, known to most of our readers by "Nature Study in the School." This paper describes a three years' scheme study that Dr. Hodge has carried through with his students. Its characteristic feature is that it brings the student from the beginning into contact with out-of-doors laboratory, and gives occasion for the growth of a wide range of real interest there. It should prove very suggestive to science teachers in Training Colleges.

The fourth paper is from Dr. Burnham, of Clark University. He reviews several investigations into the physical and mental results of home study that have been carried out recently in the United States and in Germany, and at the end gives a brief summary of conclusions to be drawn from them. The chief points made out are that, generally speaking, the home studies of children under 12 years are physically harmful, and have little mental value; corresponding work done at school is better done and better remembered. In later years solitude seems advisable for essay writing and work requiring great concentration and originality. The older the pupil the stronger his preference for carrying on private study at home rather than in class.

This number contains, also, an article on "Boys' Games" that should have special interest for leaders of Boys' Clubs and Brigades. Amongst the book reviews, "Child Music," by Mr. Platt, should be read. M. E. F.

Archives de Psychologie, June, 1905. Price 3 francs. 70 pp. Williams and Norgate.

There is little in this issue of educational, but much of psychological interest. In the first article Professor W. James discusses "Dualism," under the title of "The Ideal of Consciousness." The argument throughout is close, and does not lend itself to summary; the final conclusion is that "things and thoughts are not fundamentally different, but are made of the same matter," which, however, we are unable to define as such, but can only feel; and which we may call if we wish, "the matter of experience in general." M. Ed. Claparède follows with an article on "Is Comparative Psychology Legitimate?" The writer examines the old objection to comparative psychology, the difficulty of determining how far animals are conscious beings. He admits that the consciousness of animals quite escapes our means of immediate investigation, but considers that this objection is not insuperable, with prudence on the part of the investigator, and remembrance of Professor Morgan's principle of admitting only the simplest explanation sufficient to account for the phenomena. In conclusion he declares that comparative psychology is as legitimate as human psychology. The third article, with an introduction by M. Flournoy, is written by Miss Frank Miller, of New York, and deals with "Some Facts of Subconscious Creative Imagination."

There are, as usual, some lengthy reviews, one of which is devoted to Professor Stanley Hall's "Adolescence," concluding with a wish that this may shortly find a French translation or adaptation. "Nothing, indeed, would be more useful for our old Latin spirit, in the matter of education, than to infuse into it a little of this new spirit, so different in tendency and in inspiration, which blows from across the Atlantic, and of which Mr. Stanley Hall is one of the most brilliant and vigorous representatives." So declares the reviewer, whom one may presume, from the initial F., to be M. Flournoy.

T. G. T.

A Boy's Control and Self-Expression. EUSTACE MILES, M.A. 572 pages. Published by the Author at 10, St. Paul's Road, Cambridge.

In few respects do we differ more from our forefathers than in the greater regard we have for our bodily welfare. New foods have been devised and new suggestions are always being made; many books have been written on the all-important subject, and no advertisements are more startling than those devoted to this topic. Among the multitude of counsellors there may be wisdom, yet if one were to attempt to give heed to all, his life would be busy if not long.

In this direction Mr. Miles has gained recognition as an expert, the more so that he is himself testimony to the efficacy of his own theories. Of all the many methods suggested for keeping well he makes his choice in slow eating, deep breathing, and physical exercises. Of the first two the reader may be somewhat weary before he has finished with the book; yet the advice is good and is not costly in practice.

This work seems designed to serve a double purpose—to be a guide both to those who have charge of boys and to the boys themselves. Here is at least a weakness, for much of the matter written for the first purpose will prove uninteresting to boys, and some is distinctly unsuitable. And, indeed, much of this matter is not very valuable and could have been safely omitted—the guardian will need to be both dogged and conscientious who will plod through the introductory chapters of Part I. intended for his benefit, and will be virtuous indeed if he does not heave a sigh of relief at the end of them. Here there is much redundancy, much doubtful theory, many half truths. The author tells us in his preface that he has collected in recent years "piles of notes" on the subjects dealt with. One recognises those notes. You may find yourself dealing with a paragraph the point of which is not at all clear; a few pages later you may come across a similar paragraph, which you feel is meant to enforce the same truth; and even then you may not have said your final adieus to this ghost of a thought. Throughout the book there is much that might have been more clearly and tersely expressed.

But, after all, the work does not pretend to be a classic, and the writer will be content if only his advice is followed—and his book is sold. And there can be no doubting the earnest spirit which inspires the work, nor the value of many of the suggestions made. His insistence upon the value of full breathing, of leisurely eating, of better bodily positions, of correct carriage, of varied exercises, of due attention to diet and personal cleanliness is justified. He enforces the importance of the formation of good physical habits in early childhood, and rightly attributes much future harm to early neglect in this particular. He believes in the virtues of regularity of life—even to the extent of regularly wishing others well—and a strong commonsense guides many of the suggestions. He is careful to warn against overstrain in exercises; he does not believe that there is only one form of diet for all men, though certain as to what is best for himself; there is danger lest the self-examination and watchfulness he frequently advises may lead to morbid self-consciousness, though he lays great stress on the value both of humour and of repose.

Certainly, the most valuable portion of the book is to be found in the very varied and well-adapted exercises suggested, accompanied as they are by some capital sketches and much sensible advice. If, indeed, the greater part of this section, together with some of the earnest and sympathetic chapters of Part III., could, with some modifications, be reprinted, we should have a book which would appeal to adolescent lads, and help to guide them in a direction where many often lack that guidance they need. T. G. T.

BOOKS AND PAMPHLETS RECEIVED.

Technical Education in Evening Schools. Swan, Sonnenschein & Co.
Hand and Eye Training. Clarkson and Griffiths.
A Boys' Control and Self-expression. Published by Author.
Report of Educational Research Club. Hartford, Connecticut.

MAGAZINES RECEIVED.

Zeitschrit für Padagogische Psychologie, Pathologie und Hygine. Walther, Berlin

Archives de Psychologie. Geneva—London: Williams and Norgate.

Parents' Review. Kegan, Paul and Co. 6d. monthly.

Child Life. George Philip and Son. 1/- per Quarter.

Educational Review. Educational Review Publishing Co., New York. 16/6 yearly.

Vaktijdo-chrift voor Onderwijzers. Amsterdam.
Teachers' Institute Magazine. Kellogg and Co., New York.
School Review. Chicago. 20 cents. monthly.
L'Education Familiale Review de la Ligue Nationale, Bruxelles.
La Gymnastique Scolarie, Bruxelles.
L'Etude. Philadelphia. 15 cents. monthly.
Indian Journal of Education. Madras. 10 annas a month.
Japanese Magazine of Child-Study. Tokyo, Japan.

Branch Reports.

All Honorary Secretaries of Branches are urged to read the letter from the Hon. Gen. Secretary, which appears in this issue. This does not imply that other members should avoid reading that letter.

The programmes of the Branches promise well for this session, though one might wish to see more quantitative studies; that read by Professor Barnes before the London Branch was a brilliant example of what can be achieved in this field. The London Branch itself, however, is no more active than others here.

The activity of the Manchester Branch—working in conjunction with the Froebel Society—is again shown in a valuable memorial on the "Attendance of Children under Five." A copy of this is included in the report and will well repay perusal.

T. G. T.

BIRMINGHAM.

President—Professor J. H. MUIRHEAD, M.A., LL.D.
Vice-Presidents—Miss DALE; Mrs. HUME PINSETT; Rev. E. F. M. MACCARTHY, M.A.; Prof. A. HUGHES, M.A.; Dr. W. JORDAN.
Hon. Sec. and Treasurer—Miss A. J. DAWES, LL.A., 75, Gladstone Road, Sparkbrook.

The following Meetings have been arranged for the coming Session, and will be held at the University, at 6 p.m.:—

1905.
October 17th—"English Literature in Elementary Schools: Recent Developments and Future Possibilities." Thos. J. Jenkins, L.C.P. (London).
November 7th—"Attendance of Infants under five-and-a-half." Miss Palmer.
December 12th—"The Acquisition of Language and Expression." Dr Alexander Hill (Cambridge).
1906.
January 23rd—"Apparatus and Equipment of Infants' Schools." Miss Byett, L.L.A.
February 20th—"The Medical Inspection of Schools." Walter R. Jordan, M.D.
March 20th—"Co-operation between Primary and Secondary Schools." Alfred Flavell.

At the first Meeting of the Session 1905-6 of this Branch, held October 17th, Mr. Thomas J. Jenkins, of London, delivered an address on "English Literature in Elementary Schools: Recent Developments and Future Possibilites." He pointed out that a revolution had taken place in the methods of instruction in Elementary Schools during the past fifteen years. The Board of Education, judging by the recently issued suggestions to teachers, were desirous of going further in the development of greater freedom and wiser methods. This was good testimony to the use made by the teachers of freedom already acquired. But while they had more freedom in method they desired more freedom as to the details of the curriculum. He pointed out that the word "Literature" would express more than "English" if it were adopted in the Board of Education code. They had failed in the past in this way. Children might leave the schools able to read and fond of reading, but they had not been guided in their tastes. The great authors of the country were not familiar to them, and hence they turned for their reading to the "scrappy" publications so freely supplied to-day. What were the possibilities within their reach for introducing the children to the best authors? He thought they might divide them into two parts. First a child should be taught to express itself in correct language. In the second place, the course of studies should be so arranged that by the time the child closed its school career it should have a knowledge of our great prose writers and poets, of their environment and influence, and of the beauties of their writings, all leading on to a taste which would develop with their years and tend to make them not only readers, but thinkers and explorers. The speaker mentioned a number of standard works which are on the publishers' lists, and were easily procurable by teachers for use in the schools. Proceeding to deal with the subject of composition as the chief indirect aid to the teaching of literature, he sketched out a plan whereby children from the very first may be taught to compose sentences by the guidance of objects and pictures. The older children would find their composition lessons best based upon the study of one book, and "Lamb's Tales" was mentioned as suitable for the upper classes, especially as they would probably be studying a play of Shakspeare in connection with their literary lessons. Referring directly to the subject of teaching literature, the speaker dealt in detail with the classes. As in his school, he pointed out, historical stories simply told tales and stories dealing with home life, animals and birds were helpful for the lower classes. In the upper school, Dickens, Scott, Maryatt, Kingsley, Wordsworth, Tennyson, and Shakspeare might be added to the history and geography readers in use. He emphasised the fact that "rote" work should be subordinated to a knowledge of the author's aims, teachings, and aspirations. The aim should be to make the lessons throughout the year an encouragement to the children to love the writings for the beauties they contained, so that when they left school there might be hope that they would become, out of curiosity and interest so awakened, explorers in that great field of their native literature, which to-day, more than at any other time, lay so easily within their reach. In conclusion, Mr. Jenkins emphasised the necessity there was for putting the responsibility for any slowness there might have been in the development of the subject upon the right shoulders. The teachers should take their share; but behind the teacher there was the inspector. From the inspector they needed straight speaking, fatherly advice, and help, as the result of experience gathered by visiting many schools. The inspector should stand in the same relationship to the head of the school as the head of the school did in relation to his assistants.

A discussion followed, and a hearty vote of thanks was passed to Mr. Jenkins for his address.

CHELTENHAM.

President—G. G. **Pruen**, Esq.
Vice-Presidents—Dr. S. T. **Pruen** and Dr. H. **Cripps Lawrence**.
Hon. Secretaries—Miss M. A. **Chevallier** and Miss M. M. **Elliot**,
The Ladies' College.

The Annual General Meeting (which was also the first meeting of the Twelfth Session of the Branch) was held at the Ladies' College, on Wednesday, October 25th. The balance sheet for last session was presented and passed; it showed that the Branch was just solvent. The following elections were made:—President, G. G. Pruen, Esq.; Vice-Presidents, Dr. S. T. Pruen and Dr. H. Cripps Lawrence; Honorary Secretaries, Miss M. A. Chevallier and Miss M. M. Elliot; Honorary Treasurer, Miss E. Jenkins; Honorary Press Secretary, T. M. A. Cooper, Esq. Committee:—Miss Beale, Dr. Eveline Cargill, Miss E. Chevallier, C. H. King, Esq., and Miss L. Roberts, with power to co-opt five other members.

The President, Mr. Pruen, delivered a lecture on "Specialisation." The lecture was a plea for early specialisation, the main foundation of the argument being the fact that the average man is only capable of excellence in one pursuit, and that only in the event of his giving his whole mind to it. The argument was infused by analogies with the methods used in the training of animals, and with the procedure adopted by men in pursuits other than intellectual. The lecturer traversed Dr. Karl Pearson's statement that there is a real lack of ability in the nation, by showing that present methods of testing, say, candidates for County Council Scholarships are not calculated to find out the boys of real practical ability; and he maintained that, if his views could be realised, so that eventually every man could be set to the work for which he was best fitted, the efficiency of the nation would be increased, and the man himself made happier. In view of the valuable character of these results, the lecturer was willing to run the risk of any narrowing effect which specialisation might have on the minds of those to whom the process was applied.

On November 10th, Professor Lloyd Morgan gave a lecture on "The Five Steps." It is the last of these steps which gives the key-note of mental development. The end of it is some form ofbehaviour or conduct. Even in lower forms of life this is the same. The tropism of plants is a kind of behaviour, an application dependent upon the presentation of the appropriate conditions, consequent upon a long course or racial preparation through countless generations of ancestors. In the life of animals this is still very obvious. But by a skilful set of examples the lecturer showed how the lower animals fail to analyse the situations in which they find themselves, so that their mental development never advances very far. The child shows the same inability at first: even the adult is many times at fault in this respect, when the development in question is a development of skill. But, eventually, in all cases the analysis proceeds, and with the accumulation of experience the human being is able to apply to new situations a sort of ordered system of knowledge which gives them a new significance. Here we are in the stage of education as distinct from training, and the ideational process of comparison, abstraction and generalisation becomes normal in the mind. But, just as in the elementary cases of the plant and the lower animal, the end of the process is a proper functioning of the organism, an application of energy. The lecture, which was interesting and stimulating in the highest degree, concluded with a review of the five steps as they appear in modern educational procedure.

The other meetings arranged for the Session are as follow:—
December 12th – "Children in Literature." Miss Innes.
February 14th—"Infants' Schools." Miss K. Phillips.
March 15th—"Education in its Relation to Rest and Recreation." Dr. H. Cripps Lawrence.

The members of the Branch have been strongly urged to subscribe to *The Paidologist*.

T. M. A. Cooper.

DERBY.

President—Miss A. C. Tuke, The High School for Girls.

There is nothing to report of this Branch beyond the fact that the late Hon. Secretary has left Derby and no other has been secured.

EDINBURGH.

Hon. Secretary—Mrs. Andrew, 27, Alva Street.

Our programme of lectures on "Environment of Children from various points of view" was carried out with great success last Winter, and for this Winter we are in process of arranging a course of lectures to some extent on the lines of the "scheme" sent round to Branches. We are also doing some practical work for the "scheme." A Sub-Committee of our Branch has drawn up a paper of questions on the subject of the Teaching and Care of School Children under seven, which we have arranged to send to all schools (public or private) in the counties of Midlothian and Fife. The Sub-Committee will tabulate the answers received and forward the information to the General Secretary of the Child-Study Association.

(Mrs.) T. H. Andrew, *Hon. Sec. (pro tem.)*

LIVERPOOL.

President—Professor Sherrington.
Hon. Secretary—John Hay, M.D., 12, Rodney Street.

The first meeting of the Session was held on October 27th, in the Liverpool University. Professor Sherrington was unanimously elected President. He gave an address dealing with the awakening interest in the subject of Child-Study, and referred to recent investigations dealing with the amount of time allowed for sleep at the large public schools in England and America. The following is the Programme for the Session :—

Saturday, November 25th—"Nursery Schools." Miss Kate Phillips, Superintendent Method Infant School, London C.C.

Friday, December 8th—Three Short Papers: "Camp Life," Miss Knight. "Open-air Education," W. Dakin, Esq., Secretary Teachers' Nature Study Society. "Out-door Geography," illustrated with lantern slides, W. H. Edwards, Esq., Walton Lane Council School.

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Saturday, January 27th—"Holiday Schools." Mrs. Humphrey Ward, engagements permitting.

Friday, February 9th—"The value of Music in Education." Arthur Somerville, Esq., London, engagements permitting.

Friday, February 23rd—"Some of the more Common Diseases of Childhood, their recognition and prevention." R. C. Dun, Esq., F.R.C.S.

Friday, March 3rd—"School Morals." H. V. Weisse, Esq., M.A.

John Hay, *Hon. Sec.*

LONDON.

President—Sir John Cockburn, K.C.M.G., M.D.

Hon. Secretary—Miss K. Stevens, Carlisle House, Dartmouth Park Hill, N.W.

The Programme, arranged again in conjunction with the Childhood Society, has, so far, only been fixed until Christmas.

Sir John Cockburn's opening lecture provided an interesting *resumé* of various aspects of Child-Study, and many suggestions as to possible lines along which some practical outcome might be found. He referred to the scheme of work issued by the Council, and emphasised the importance of not excluding children under five from the infant schools until some satisfactory substitute had been found for these.

Dr. Cecil Reddie's lecture was very interesting, if somewhat long and discursive. It seemed that the main cause of our degeneration was either our reluctance or our inability to adopt German methods, whether in municipal control, railway organisation, or education. Many suggestive comparisons were made between the two countries.

A very cordial welcome was given to Sir Edward Brabrook on his first occupying the chair at a meeting of the combined societies, and hearty congratulations were offered to him on having received the dignity of knighthood. And of these none were heartier than those from the members of our Association who have been brought in touch with him in connection with the proposals for the joint working of the two Societies. They have learnt to appreciate his unfailing courtesy and kindness, and the skill with which he has dealt with the points at issue.

Professor Earl Barnes' lecture was reminiscent of many other fine lectures to those who had heard him before, and a revelation to those who had not. It raised wide questions of the significance of the social issues of history teaching, and of its utility as providing worthy moral and national ideals. Under Professor Barnes' guidance the discussion afterwards turned on how English history could be treated to these ends, and how far leaders of sections of society—trades unions, &c.--could use it to develop a corporate spirit among their members. T. G. T.

Lectures and Discussions arranged by the Childhood Society and the British Child-Study Association, to be delivered in the Parkes Museum, Margaret Street, W.:—

*Thursday October 19th—Annual General Business Meeting of London Branch of British Child-Study Association, at 7.30 p.m. Address by the Hon. Sir John Cockburn, K.C.M.G., M.D., at 8 p.m.

†Thursday. October 26th—"Some Causes of Physical, Mental and Moral Degeneration." By Cecil Reddie, B.Sc., Ph.D., Headmaster of Abbotsholme School, Derbyshire. At 8 p.m. Chairman, Sir Edward Brabrook, C.B.

*Thursday, November 2nd—"A Quantitative Study: Children's Attitude towards History." By Professor Earl Barnes, M.A. At 8 p.m. Chairmaa, Professor M. E. Sadler, M.A.

†Thursday, November 9th—"Speech Training of Feeble-Minded Children." By M. Friedeberger, Ph.D. At 8 p.m. Chairman, A. A. Allen, Esq.

*Thursday, November 16th—"Physiological Child Life." By Prof. W. D Halliburton, M.D., F.R.S. At 8 p.m. Chairman, C. W. Kimmins, M.A., D.Sc.

†Thursday, November 30th--"Training of Teachers for the Care of the Feeble-Minded." By Francis Warner, M.D., F.R.C.P. at 8.15 p.m. Chairman, Sir J. Lauder Brunton, M.D., LL.D., F.R.S.

†Thursday, December 7th—Discussion on Infant Classes. Opened by John Kerr, M.A., M.D., D.P.H., Prof. H. R. Kenwood, M.B., D. P. H., Miss Phillips, Miss Findlay, B.A. Chairman, J. H. Yoxall, M.P.

*Thursday, December 14th—"Moral Intuition and Common Sense: A Study of Original or Inherited Moral Capacity." By H. Thistleton Mark, M.A., B.Sc. (Lecturer in Education to the University of Manchester). Chairman, R. Blair, M.A., B.Sc.

†Arranged by the Childhood Society.
*Arranged by the British Child-Study Association.

Since the last published list of members of the London Branch the following have joined:—

Mrs. Arnold, Miss E. Ansorge. Herr Blem (M.P. Denmark), Miss H. Brown, Miss J. Bevan, Mr. G. E. Buckle, Herr Biltorf (Denmark), Mrs. Bowler. Mr. Cullen, Mr. Crisp, Mr. W. L. Clague, The Hon. Sir John A. Cockburn, Mr. T. H. Carr, Mr. E. A. Carr, Miss J. E. Carter, Miss Cussans, Sir Jas. Crichton-Browne. Mrs. Davies, Miss A. E. Danzelman. Mr. Every. Mrs. Franklin, Mrs. J. Fels, Miss Finch. Mrs. Gibbs. Herr Hansen (Denmark), Dr. J. F. Haines, Miss Hadfield, Miss D. Hooke, Miss L. Hollingdale, Miss Hollingdale, Miss B. Hollingdale, Miss M. A. Howard, Mrs. Hill, Mrs. Hart-Davis, Mrs. Hardwick. Miss A. Kelly, Mrs. Kirk (Bradford), Mr. H. T. Knowlton. H.M.I. (India), Miss Knowles. Miss Ladner, Mrs. Lang. Herr Mikkelsen (Denmark), Mr. C. Montefiore, Mr. J. C. Medd, Miss Muft, Mr. A. J. Mundella, Miss Munton, Miss Marx. Miss Punnett, Miss Pateman, Mrs. Perrott. Mrs. and Miss Rosenheim, Miss Rogers, Miss A. Robertson. Mrs. Scharlieb, M.D., Dr. Alf. Spitzner (Leipzig), Mrs. Summers, Mrs. Srencer, Miss V. Shuttleworth, Miss E. Shuttleworth, Mr. W. T. Stead, Miss F. Stackpoole, Miss M. Sullivan. Miss Tilleard, Dr. Thomas, Miss M. E. Turner, Miss Turley. Miss E. F. Wright, Mr. A. C. Whitmee.

MANCHESTER.

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Hon. Treasurer—Mr. JOHN MATHER.
Hon. Secretary—Miss F. W. HARRISON, High School for Girls, Dover Street.

Minimum Subscription, with *Paidologist*, 2/6. All Subscriptions are due in October in each year.

The following is the programme for the Session:—

1905.
Friday, October 6th—Annual Meeting. "Ought Children under five to be excluded from our Infants' Schools." Discussion opened by Miss Wroe.
Tuesday, November 7th—"The Training of Children from three to five in Infants' Schools." Mrs. Kirk (Bradford).
*Monday, December 4th—"Education in Japan." Miss E. P. Hughes.
1906.
*Friday, February 9th—"The Training of Pupil Teachers." Mr. W. E. Urwick.
*Friday, March 9th—"Organised Games in Secondary Schools." Miss C. Herford; Mr. S. W. Meek.
May—Meeting not yet fixed.

The meetings marked with an (*) are in conjunction with the Teachers' Guild, and will be held at Owens College. Other meetings will be held at the High School for Girls, Dover Street. The meetings begin at 7.30 p.m.

First Meeting October 6th. Dr. Ashley in the chair. Paper read by

Miss Wroe, Head of the Manchester Kindergarten College, entitled "Ought Children under five to be excluded from our Infant Schools." The opinion of the meeting was unanimous as to the advisability of sending such children to school, whilst, at the same time, it was freely admitted that reforms are needed in the existing conditions of most Infant Schools. The question was discussed from various points of view—financial, physical, educational. The outcome of the meeting was the appointment of a Sub-Committee to consider what might be done in the matter. This Sub-Committee met on the 12th and 19th, and it was decided to draw up a memorial or memorials to the Board of Education. The result was the following :—

MEMORIAL ON ATTENDANCE OF CHILDREN UNDER FIVE.

We, the undersigned, view with grave apprehension the proposal on the part of the Board of Education to exclude children between the ages of three and five from the Infants' Schools, or to reduce the grants on such children, as set forth in Article 53 of the Code, 1905, and as proposed by Sir William Anson in Committee on August 1st, 1905.

We are convinced that the *reform* of the Infants' Schools and not the exclusion of the children is what is required, and that if the plan of exclusion is carried out, reforms already in progress will be arrested.

Keeping in view the home conditions and surroundings of the vast majority of the children under five years of age attending the Infants' Departments of our Public Elementary Schools, we should ask you to consider the following points:—

FIRST: *On Hygienic Grounds.*

(*a*) The children are benefitted by the enforced cleanliness and regular and decent habits rendered necessary by attendance at School.

(*b*) Measles and Whooping Cough, the most fatal and the most neglected diseases occurring during School life, are not notifiable by Medical Practitioners, the information acquired by the Sanitary Authorities is obtained through the Schools. Moreover, the exclusion of affected children and others from the same house is the strongest factor in procuring proper attention for those affected, and adequate precautions against their spreading the diseases. Under medical supervision and inspection many defects and diseases are found out and reported to the parents.

(*c*) The statistics of the Registrar General for 1905 show that there has been in progress since 1870 a remarkable decrease in the death-rate of children between the ages of 0 and 5 (16 per cent.). During these years, in which the Compulsory Education Act has been in force, the mortality of infants (0—1) has not decreased, while the number of children between three and five on the School Registers has increased 123 per cent.

(*d*) The manner in which these children are taught obviates the necessity of mental or physical strain, and there is nothing in the course of their education which tends to deterioration of any kind. Further, the question of the adequate nourishment of children cannot be satisfactorily dealt with if they are to be neglected until the sixth year of their life.

SECOND: *On Educational Grounds.*

(*a*) Children between three and five are at a very impressionable age; they need outlets for activity, training in good habits, and varied occupation such as very few of their homes can provide. They need social intercourse under the wise and sympathetic supervision of trained teachers in healthful, cheerful surroundings, such as an Infants' School could inexpensively provide.

(*b*) The period before the beginning of formal instruction in the "three Rs" is a very important one, and if a child's powers are left untrained during that period he has missed much that no subsequent instruction can replace.

(*c*) The value of the Babies' Class in the Infants' School is felt in the home, where the teachers' advice may be a great help to the mother; the value is also felt in the higher classes, in which the children are ready to take a more intelligent part than would otherwise be possible; and the teachers are less likely to make mistakes as to children's character and capabilities.

THIRD: *On Financial Grounds.*

Any saving of expense effected by the exclusion of the children under five will be more than balanced by the cost of the re-organisation of the Infants' Schools, and the necessity of opening Crèches.

WEST KENT.

President—Dr. Hamilton Hall.

Vice-Presidents—Right Hon. Sir William Hart Dyke, Bart., M.P.; Rev. F. G. Knott, M.A.; Rev. A. W. Oliver, M.A.; Rev. C. C. Tancock, D.D.; Mrs. Griffiths Boscawen; Miss Goldie; Miss Julian.

Hon. Secretary—Miss F. M. Watt, 14, Calverley Crescent, Tunbridge Wells.

The first Annual Meeting of the West Kent Branch of the B.C.S.A. was held on October 2nd, at the Tunbridge Wells Town Hall. The members and friends were invited to tea at 5 p.m, and the meeting was at 5.30. There was a good attendance, the Mayor (Alderman H. Thorpe) presiding. In a few well chosen words the Mayor congratulated the town on the establishment of a Branch. The number of societies already established in Tunbridge Wells was really alarming, but they might let almost anything go rather than the study of the growing generation. He then called on Dr. Hamilton Hall, the President, for the Presidential address. Dr. Hamilton Hall gave an able address on "Some Aspects of the Ideal in Child-Study." Mr. J. Surtees Phillpotts moved a vote of thanks to the President, which was seconded by the Mayor. After the meeting the Officers were elected for the year 1905-6. We have now 40 members, and have arranged to have a lecture once a month, omitting December.

Lectures and Discussions arranged to be held at Tunbridge Wells:—

1905.

Monday, October 2nd at 5 p.m—Annual General Meeting, at the Town Hall. Presidential Address.

October 30th - "Children's Interests." By Miss Mary Louch.

November 27th—"Precocity." By the Hon. Sir John Cockburn, K.C.M.G., M.D.

1906.

January 29th—"Music for Children." By Mrs. A. J. Curwen.

February 26th—"The Necessary Qualifications for the Ideal Teacher." By Rev. C. C. Tancock, D.D.

March 26th – Not arranged.

Ordinary Meetings on Mondays, at 5.30 p.m., at the Mechanics Institute, Dudley Road.

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Editorial.

Only a part of the delightful Paper read by Miss Innes before the Cheltenham Branch appears in this issue. We regret we could not find space for more, but—it is to be continued. Meanwhile, the whole has been printed privately, and those who wish for copies should apply to the Publishers.

The Paper on "The Effects of the Weather" was read before the Educational Conference held at Liège last year. The conditions with which it deals are American: neither the weather nor the estimate of what constitutes a breach of discipline, is to be paralleled here. Hence we may not always agree with the conclusions, but the article is suggestive, and the line of investigation worth following up.

Statistics do not usually provide light reading, but those which form the major part of the Report of an Investigation into Teaching Power in Elementary Schools will well repay careful study, and should prove valuable for future reference. This Report is the outcome of work initiated and carried out by Miss M. E. Findlay, B.A., assisted by a small Committee appointed jointly by the Childhood Society and the London Branch of the B.C.S.A. It is of first importance in educational reform that the schools should have an adequate supply of duly qualified teachers. Some idea of what remains to be done may be gathered from this article. The other contributions need no introduction, but we would draw special attention to the letter from Miss Louch and the Programme for the Ninth Annual Conference.

Miss Kate Stevens, the Hon. Sec. of the London Branch, who will be visiting America this Summer, has been invited to read a Paper on "Child-Study in Britain" before the Child-Study Section of the National Education Association, which meets early in July, at San Francisco. Our own Association is honoured, equally with herself, in this recognition, and we may be allowed to wish her many valuable experiences and a safe return. T. G. T.

[*The Editors wish to remind readers that the views expressed in the various papers must not be assumed to coincide in all points with those identified with the Association.*]

Children in Literature.

(WITH SPECIAL REFERENCE TO THE CHILDREN OF SHAKSPERE.)

By MARY INNES.

Paper read before the Cheltenham Branch of the British Child-Study Association, on the 12th December, 1905.

It is no expert, you will please understand, who is addressing you to-night: merely a very ordinary lover of books and lover of children.

In thinking over the child-characters brought before us in books, I notice that they seem to fall into two entirely distinct classes: the children who belong to an age, and the children who belong to all time. As we might expect, those in the first class are the creation of writers of talent; those in the second owe their independent and mysterious vitality to the informing spirit of genius. In the former class we have as a rule more elaboration, more detailed description—in fact, a more complete objective presentment of the child; in the latter we often find that our own imagination must focus and amplify the characters that are but suggested by their creator. In the case especially of Shakspere's children, I am reminded of that splendid seventh book of the *Paradise Lost,* in which Milton describes the gradual creation of the animals. His "tawnie lion," now half-appearing through the glassy clods and "pawing to get free his hinder parts," is more stupendously alive than any fully-described example to be found in a Cyclopædia under the heading of "Felidæ."

And in the same way, I fancy (it may be nothing but fancy) that some of the children of literature lie imbedded in their books like mounted specimens in a case; while others show signs of that restless "pawing to get free" which convincingly places them in the ranks of the living.

So I propose to glance first at a few of the "mounted specimens," and to dwell especially on the correspondence between these children and their historical environment: for it is this correspondence which obliges us to classify them as "belonging to an age." I look back only to the last half century, recalling a few groups of books that seem to illustrate this suggestion. One famous book of the early Victorian era continues, I find, to be re-printed. I allude to the *Fairchild Family*, by Mrs. Sherwood. In that book we meet with a remarkable leading group of children, who act as foils to various minor specimens, these having their exits and their entrances in a very arbitrary manner. The central group, the foils, are Emily, Lucy, and Harry Fairchild, whose education in religious principles forms the subject of the story. As this book was written at the time of the great Evangelical revival, we find that whole movement reflected in the child-characters before us. They represent in their little fragile persons the abnormal depravity which was then attributed to human nature. And so these unfortunate puppets display an astonishing ingenuity in the invention and perpetration of so-called "wickedness" — a wickedness unrelieved by mirth, and miraculously exorcised by the application of the religious formulæ of the day.

On some occasions sterner measures were adopted. Once, after a quarrel in the Nursery about a doll, and the exchange of uncharitable words, it was decided by the parents to reprove this particular wickedness by means of a terrible spectacular warning. With the approval of Mrs. Fairchild (who shrank, however, from witnessing the scene), Mr. Fairchild led forth his helpless children towards a gloomy wood. One of them (the boy) was so small that he had to be carried by a servant, for the walk was long. At last the spot was reached, an old garden surrounding a forsaken house, and there, swinging on a gibbet, was the corpse of a murderer. We read that "the face of the corpse was so shocking that the children could not look on it." "Oh, Papa, Papa, who is that ?" cried the children. "That is a gibbet," said Mr. Fairchild, "and the man who hangs upon it is a murderer : one who first hated and afterwards killed his brother ! When people are found guilty of stealing or murder, they are hanged upon a gallows, and taken down as soon as they are dead ; but in some particular cases, when a man has committed a murder, he is hanged in iron chains upon a gibbet till his body falls to pieces, that all who pass by may take warning by the example." Whilst Mr. Fairchild was speaking, the wind blew strong, and shook the body upon the gibbet, rattling the chains by which it hung. "O let us go, Papa," said the children, pulling Mr. Fairchild's coat. "Not yet," said Mr. Fairchild ; "I must tell you the history of that wretched man before we go from this place." So saying, he sat down on the stump of an old tree, and the children gathered close round him.

There was a natural touch in that cry to go away when the tortured children pulled at Mr. Fairchild's coat. But we feel as though we were moving in a sort of nightmare world, and that there can be no kinship between the delicate little children of our own acquaintance and these tough artificial figures whose chief literary purpose is to point a moral. And we think with both surprise and pity of the real children who read this book, feeling sure that they, too, must have been made of tougher material than their modern representatives.

To the same class of literature as the *Fairchild Family* would belong, I suppose, Miss Edgeworth's *Tales*, Rosamond and Harry and Lucy, which, though written quite early in the last century, continued to be popular with young readers for very many years. The children in these books must have been more natural, I feel sure, than those in Mrs. Sherwood's; but the same fault of using them as a medium for the inculcating of moral lessons has doomed them to oblivion.

Moving nearer to our own day, we have some famous children in the works of Dickens, yet these again exhibit the characteristics of the mid-Victorian era rather than the eternal qualities of childhood. Little Nell and Paul Dombey, for instance, are carefully and elaborately portrayed, and there must have been some spark of life in them to kindle the admiration of the age by which they were accepted. Yet I am afraid they would seem sadly unreal to us now if we attempted to renew their acquaintance, and sadly unreal, too, to the readers of the present time. Dickens's children reflect their historical environment by serving as vehicles for the expression of a form of sentiment we now regard as false. And pathos which moved tears in the sixties finds us strangely stoney to-day. I have heard Dickens called "a master of falsetto": and if the accusation sounds harsh to those who win laughter and refreshment from his writings, yet few, I think, would deny that this high artificial key is always struck when his child-actors are brought upon the stage. And so they do not live, but interest us only as curious child-types in which are reflected a past phase of thought and feeling. For, in contrast to the abnormally wicked child of Mrs. Sherwood, we have in Paul and Nell the ultra-virtuous child—the child who accepts and unconsciously obeys moral abstra~~s~~ions rather than the clear-cut religious commands which ultimately corrected the wickedness of those earlier types. And this reverence for moral abstractions, this "sceptical idealism," as G. K. Chesterton boldly defines it, is one of the main characteristics of the mid-Victorian era. The grip of theology had relaxed, but a vague sentimental respect for virtue had lingered on.

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Later still, we come to the Mrs. Hodgson Burnett type of child, her little Lord Fontleroy, and her burglar-vanquishing

Editha. Of the popularity of Lord Fontleroy there can be no question: we might almost call it epoch-making. That he filled the stage and adorned the stage is a truism. And perhaps it is really captious to speak disrespectfully of so bright and fascinating a little personage. But it is just because he is a personage that he is not truly a child. He embodies an ideal, and is just as flagrant an impostor as little Nell or Lucy Fairchild. And this more recent ideal is so subtilely related both to what is best and what is shallowest in our modern standards of conduct that I find it specially hard to define. Perhaps the right epithet for Lord Fontleroy is the ultra-refined child,—what his contemporaries might have called the "genteel" child. He represents the desire for what is beautiful in all our surroundings, and the desire for what is unimpeachably correct in our social demeanour—in themselves quite legitimate objects of desire. But beneath this apparently noble love for all that is excellent, there stalks the old ugly little fiend of snobbishness, on which Thackeray's stinging lash has bestowed but a short-lived punishment. This ideal of excessive refinement is with us still, and who shall dare to maintain that, provided we could escape the observation of argus-eyed Society, we should pursue it with the ardour which sustains us now. The Alsatian pastor who is preaching the Simple Life has touched only the outside of the evil; there is no complete cure except in simplicity of soul. And in Lord Fontleroy this simplicity of soul is lacking: he is always aware of the audience; and though he plays to the stalls rather than the gallery, he, too, must be writ down as a "mounted specimen" in a case.

Before treating of more child-like children who await our notice, I should like to mention quite cursorily, Pet Marjorie, the real child, whose biography has quite recently been published. Little Marjorie Fleming, the playmate of Sir Walter Scott, has at last received full recognition. The slight sketch of her by Dr. Brown has long been accessible to the reading public. But last year a fuller life, accompanied by her "literary remains," was compiled by L. Macbean. It has already reached a second edition, just out, and in this Dr. Brown's sketch is bound up, together with the fuller record by Marjorie's latest admirer. The book is very complete, having several illustrations in it, as well as *verbatim* reproductions (spelling unaltered) of Marjorie's quaint and wonderful diaries. Many present will like to hear of this latest tribute to Marjorie Fleming, if by any chance they should not already know of it.

Let us glance now at a few of the children in well-known modern books who seem to be more truly living than those already mentioned.

We are all, of course, biassed by personal idiosyncracies, and my choice of examples may not meet with general approval. But I remember that Budge and Toddy (as amusing children), and Miles and his brother in *Misunderstood* (as pathetic children), did take a strong hold of my affections. I venture to think that *Misunderstood* must have been a greater book than we realised at the time. It seems to have inaugurated a new era, not only as regards the treatment of children in literature, but also as regards the sympathetic consideration of them in real life. The author's insight into child-nature revealed a capacity for suffering that many a purblind parent had never before suspected. And I think it very probable that much of the chivalry which now marks our dealings with children may be due to that remarkable book.

George Eliot's children, I think all will allow, are truly alive: her golden-tressed Effie (in *Silas Marner*) continues to delight us with that mingled attraction of mischief and cajolery, which works such havoc with parental theories when tested by contact with a flesh and blood child. And George Eliot's study of Maggie Tulliver and Tom, in the early days when they relished jam-sandwiches, must, I think, be accepted as a representation of childhood that holds good for all time.

For those who will brave the intricacies of a wilfully-crabbed style, there are fine studies of boys to be found in George Meredith's works, Crossjay, for instance, in the *Egoist*, being, perhaps, one of the most aggravatingly delightful specimens of the genus to be found in literature.

But there is one writer who seems to catch the glamour of childhood with a peculiarly delicate and happy grace: I allude to Mrs. Ewing. All her children are charming, yet they are unaffected and natural. One child, the brave little sufferer who took for his motto, "*Lætus sorte mea*," is already securely enrolled among the immortals.

No doubt you have heard of that heroic army of "Poor Things" who honour Leonard of the "Short Life" as their spiritual captain. It is a vigorous and progressive society that continues to devise new methods of bringing happiness into the lives of suffering children. The reports, written by Miss Vachell, of country outings undertaken and enjoyed by crippled and yet valiant imitators of little Leonard, are pathetic reading. And the word pathetic, we remember, should include the feeling of a subtile and elevating joy, together with the feeling of compassion. The child who has created this band of rejoicing martyrs must have had in him a rare vitality. I can conceive of no purer consolation for the mother-heart of Mrs. Ewing (unblessed by actual motherhood in this life) than the knowledge that a child born of her imagination should have served to bring courage and happiness to so many living child-sufferers.

But I must not wander from the immediate subject. Other children are calling for notice, and I am anxious to look rather closely at the little band of them that we find in Shakspere. Before doing so, I must remind you that as only a very few of these children in Literature have been selected from the modern crowd, it is inevitable that many a favourite has been overlooked. We are living in an age that concerns itself greatly with children: they are more noticed, more studied (witness this Society) than was the case in former times. And certainly our writers for children and about children seem to have acquired an insight into child-nature that is new and remarkably accurate. It is an age of child-worship: for no milder term fitly describes the attitude of such writers as Coulson Kernahan, E. V. Lucas, Keneth Grahame, William Canton, E. H. Cooper, and others, who have glorified and exploited the "Twentieth Century Child." These writers carry most of us along with them, so that we accept their presentment of childhood, and feel incapable of criticizing it. But they, too (like talented writers of the past), may be reading their own thoughts into the minds of the children they portray. These children, too, may embody some temporary and evanescent ideal.

It is a fact often noticed by students of Art that during great creative periods, as in the age of Pericles, in Athens, or of Leonardo and Michael Angelo, in Italy, the representation of children in Art is very rare. Virility, maturity, experience, the strong emotions known only to the adult—these appeal to the great masters of every age and country. It is a sure mark of decadence when the little winged cupid is modelled for its own sake, or the cherubs in glory are painted with the same enthusiasm as the saints on earth. And in the kindred art of Literature we observe that children are rarely introduced into those works which hold the front rank. The inference that we as a nation are declining is not palatable, but it may—just possibly—be correct. And, at least, it may be well to recognise that child-worship has marked former unmistakeable periods of decline, and therefore we should scrutinize closely the children in Literature who are among us now.

For a moment let us consider a few of the leading attributes of childhood that we all recognise as permanent, and therefore normal.

(1) We expect first, Simplicity—by which we mean a complete absence of self-consciousness and a directness of outlook on life which makes the child the most clear-sighted and disconcerting judge of the motives of his elders.

(2) Secondly, Trust—a readiness to believe all that he is told, and a settled restful assurance that he is very dear to the hearts of all about him—the true source, no doubt, of his unquenchable gaiety.

(3) A desire for justice that amounts to a passion, and a very quick and fine perception of the main elements of justice.

(4) An intellectual curiosity, tempered by misgivings on the one hand and daring expectations on the other—to which we sometimes give the name of the "Sense of Wonder."

(5) A quite irrepressible and incurable instinct of copying, to the extent of mimicry, the words and actions of his elders. In the language of Wordsworth:

> As if his whole vocation
> Were endless imitation.

These qualities seem to be the peculiar dower of childhood, and they fade very rapidly under the "light of common day." Besides these peculiar qualities, the child has within him a turbulent stud of all the evil passions known to the grown man: self-will, envy, indolence, greed, fear, vanity, and all the other horrible fiends that continue to plague us throughout the long journey of life. After all, that old doctrine, which we moderns are so apt to ignore, the total depravity of the human heart, must be substantially true; though in the child these passions, like the rest of his nature, are undeveloped, and may be greatly modified by education and grace.

In a faithful presentment of a child, we may, however, justly expect to discover the qualities peculiar to immaturity, and also some manifestations of the evil propensities which are common to the human race.

With these test-indications in our minds, let us look at some of the children who yearn out towards us, pleading for a more comprehending love, from the pages illumined by genius.

Think of Lamb's children: I shall touch only on two examples. Recall the "Dream-Children," Alice and John, who lived only in his reverie, and are idealised almost into ether,—yet the true child-characteristics are there. The Trust that hangs credulous on every word of his tale, and the Sense of Wonder, so well indicated by the opening words: "Children love to listen to stories about their elders when *they* were children, to stretch their imagination to the conception of a traditionary great-uncle or granddame whom they never saw." We notice, too, in the children here, their sense of justice (or, perhaps, rectitude would be the better word), as they grant approval or blame according to deserts, and through the whole episode they are alert with the instinct of imitation. Let me quote a few illustrations. When their dream-father (if I may coin the word) tells of a foolish rich person who pulled down a fine oak chimney-piece on which was carved the story of the Children in the Wood, and replaced it by a marble one of modern invention, with no story upon it, we read that " here Alice put out one of her dear mother's looks, too tender to be called upbraiding." And after the recital of another similar piece of vandalism comes the comment: " Here John smiled, as much as to say: 'That would be foolish indeed.' " Referring to the personal charms of "great grandmother Field," and how she was "esteemed the best dancer," there is a break to inform us: " Here, Alice's little right foot played an involuntary movement." After the allusion to ghosts and the courage of great-grandmother Field, who dared to sleep alone in the haunted house, we learn that " Here John expanded all his eyebrows and tried to look courageous." But the prettiest touch of all follows the account of their own dream-father's childhood, in which he tells of his love for all curious and beautiful outdoor sights, and how he had " more pleasure in these diversions than in all the sweet flavours of peaches, nectarines, oranges, and such like common baits of children." " Here John slily deposited back upon the plate a bunch of grapes which, not unobserved by Alice, he had meditated dividing with her, and both seemed willing to relinquish them for the present as irrelevant." These children cannot be imprisoned in any one period of time,—they preserve their freshness, and continue to live on with that indestructible life which only an artist of genius can bestow.

The other illustration from Lamb to which I should like to direct your attention is the Essay on Barbara S———. In this case a real child is brought before us, but the sympathy with which she is depicted gives to her the more enduring charm of a child of the imagination. The story is of a little child-actress, employed in the Chorus of a Bath theatre, whose "slender earnings were the support of the family, including two younger sisters." To her came a severe crisis of temptation, when her natural rectitude came into conflict with the equally natural desire to retain a half-sovereign which had been given to her by mistake in her weekly pay. The whole mental experience, told in later years by Barbara herself, is very touchingly and forcibly rendered.

> Her first impulse was to go back to the old treasurer, and explain to him his blunder. He was already so confused with age, besides a natural want of punctuality, that she would have had some difficulty in making him understand it. She saw *that* in an instant. And then it was such a bit of money! and then the image of a larger allowance of butcher's meat on their table next day came across her, till her little eyes glistened, and her mouth moistened. But then Mr. Ravenscroft had always been so good-natured, had stood her friend behind the scenes, and even recommended her promotion to some of her little parts. But again, the old man was reputed to be worth a world of money. He was supposed to have fifty pounds a year clear of the theatre. And then came staring upon her the figures of her little stockingless and shoeless sisters. And when she looked at her own neat white cotton stockings, which her situation at the theatre had made it indispensable for her mother to provide for her, with hard straining and pinching from the family stock, and thought how glad she should be to cover their poor feet with the same—and how then they could accompany her to rehearsals, which they had hitherto been precluded from doing, by reason of their unfashionable attire,—in these thoughts she reached the second landing place—the second, I mean from the top—for there was still another left to traverse.
>
> Now virtue support Barbara!
>
> And that never-failing friend did step in—for at that moment a strength not her own, I have heard her say, was revealed to her—a reason above reasoning—and without her own agency, as it seemed (for she never felt her feet to move), she found herself transported back to the individual desk she had just quitted, and her hand in the old hand of Ravenscroft, who in silence took back the refunded treasure, and who had been sitting (good man) insensible to the lapse of minutes, which to her were anxious ages; and from that moment a deep peace fell upon her heart, and she knew the quality of honesty.

It is not only genius, it is participation in child-nature that qualifies a man to write like this. And there always hovered about Lamb, to the very last, some of the glamour of childhood. You may remember his inimitable portrait of himself under the feigned name of Elia, concluding with the words: "The impressions of infancy had burnt into him, and he resented the impertinence of manhood."

(*To be Continued.*)

11

The Effects of Weather upon the Child.

By Edwin Grant Driler,

Director, School of Education, University of Ulmoir, U.S.A.

My attention was first called to the question with which this paper deals while discussing the general problems of school discipline with a body of teachers assembled for work at a Summer Institute. Its definite suggestion was the following question, put by a teacher of much more than ordinary intelligence: "Why is it that we can seem to do nothing with the children during some kinds of weather?" I had to confess frankly that I did not know such to be the case, but finding considerable unanimity of opinion on the part of those present, decided to find out, if possible, what basis there might be for such a belief.

Reasoning from *a priori* grounds, it did not seem improbable that the weather should have sufficient effect upon the emotional equilibrium of the children to make itself noticeable with them in matters of deportment.

We ourselves, most of us, feel such an influence to a marked degree. It has been recognised by writers of fiction to the extent of hingeing whole plots upon weather changes. A large class of weather proverbs depend upon the influence of meteorological conditions upon the activity of man and animals.

A writer in one of the British magazines some years ago aptly said: "There are many persons who are simply victims of the weather. Atmospheric influences play upon them as the wind plays upon the strings of an Æolian harp, with the difference that the latter never utters a discord in reply. A leaden sky weighs upon them with a crushing weight, and suggests all manner of unpleasant anticipation. Then the gloomy side of life comes out. The bitter sayings of friends are remembered: uneasy questions arise with regard to the future. One gets tired of life. A sort of indifferent dread is the general mental influence, a faint continuation of the superstitious fancies which mark the childhood of nation and men."

With sufficient evidence to warrant the expectation of some positive results from a study of the problem, the question was how to go about it. The method finally decided upon was a twofold one, and so far as it touches upon the question having to do with the public schools, is as follows:—

First,—the discussion of a questionnaire sent to more than one hundred teachers of all grades, from the Kindergarten to the High School, the answers to which were based upon the direct observation of more than 12,000 pupils. The answers were also in many cases accompanied by a description of the teacher's own subjective reaction to weather changes.

Second,—a tabulation of the records of considerably more than 100,000 days' attendance of pupils in the public school, comparing the general average of misdemeanours of various sorts, for a long series of years, with the occurrences of those misdemeanours under definite and peculiar weather conditions.

Answers to the questionnaire were received from all parts of the country. The tabulation of recorded misdemeanours was made for the cities of Denver (Colorado) and New York, but only those for the latter are considered in this paper. It will be seen that these two methods of procedure differ in this fundamental respect, that in the former we are studying the activity of the pupil through the interpretation of the teacher, and based upon his memory images, which may be faulty and tinged by his own peculiarities of interpretation, while in the latter we are comparing two sets of record, namely, those of the child's deportment and those of meteorological conditions as kept by the officials of the United States Weather Bureau, each without any reference to the other. It cannot be doubted that the latter method is free from the error of the psychologist.

It might be well to note also that in studying these weather influences, we cannot suppose that we are dealing with the *immediate causes* of any of the occurrences considered. We are not supposing that a low condition of barometer or a high relative humidity were the direct causes of any of the misdemeanours which are found to be excessive during their continuance, but that under such conditions an impulse to be refractory, whatever its immediate cause may be, cannot be so well withstood as under certain other conditions. In other words, the weather states are the causes of certain general physiological or mental conditions, some of which seem more fertile fields than do others for the action of immediate causes which are accidental to the problem. To be concrete: on a certain morning, Johnny could not have what he wanted for breakfast, and went to school in a sulk, with a consequent disastrous effect upon his deportment. Most certainly the disappointment at home had a casual relation to his demerit at school, and we need look for no excuse elsewhere. But if we take the record of two hundred Johnnies for six hundred different days, and many more of them are out of sorts upon some days than upon others, we look for a condition common to all which may, in some way, be considered the cause. We cannot suppose that bad breakfasts or whippings at home or any one of the many disappointments common to child life would bear this fixed relation, so look for it elsewhere. It must be a feature of the environment of all the Johnnies similarly affected, and one, too, which would vary simultaneously for all if it varied at all. The weather is the only condition of the environment which fulfils these conditions, and our problem is to note the concomitance in variation between the conduct of Johnny as a class, and weather states. Remember, then, that we speak of " weather effects " only in this sense.

Omitting the questionnaire study, and proceeding immediately to a consideration of the empirical problem, the effects of the various meteorological conditions upon the deportment of the child seem to be as follows :—

Temperature.—The seeming effect of the temperature upon the children in the public schools, both of New York and Denver, as shown by their deportment, is different in some respects from its effect upon any of the classes of adults studied. I believe, however, it can be shown that the conditions under which we are studying them are sufficiently unlike to account for at least a great part of the differences in their curve. This shows a less number of demerits for temperatures below 45 degrees, an excess for the groups up to 65 degrees, and, again, a deficiency for those which are higher. The lessened number for all the low degrees is fully in accordance with all the results of studies of the effect of cold climates upon physical and mental activities. It is a well-recognised fact that under conditions of low temperature, so large a portion of the vital energy is consumed in keeping the body sufficiently warm to allow a continuance of its metabolic processes that little is available for deportmental excesses, and a condition of comparative lethargy exists. With an increasing warmth in the atmosphere, this energy is diverted into other channels, and its expenditure is made known in more conspicuous ways. Nearly all the curves upon the temperature chart show this fact. Temperatures above 65 degrees show the opposite effect upon the school children only, by decreasing either the energy at command or the irritability which shows itself in bad conduct. Upon noting the material deficiency of deportmental excesses under very high temperature, both for New York and Denver, for the latter place to the extent of 30 per cent., it has seemed probable to me that it might be due to a difference between the temperatures in the school-rooms and those recorded at the Weather Bureau.

Barometer.—Notwithstanding the fact that the pressure of the atmosphere, varying as it does for a given locality, has been considered by many a great force in disturbing the mental and physical equilibrium of the people, I believe that it does so largely through its production of other states of weather, which are themselves the efficient cause. This is not true for the other meteorological conditions, as temperature, humidity, and wind have their effect *per se.* From the standpoint of our present study, the barometer is interesting only in its relation to other conditions of weather which themselves are influential. Those upon which its variations have a causal effect are the character of the day and precipitation, and this relation is very interesting. Conditions of low barometer are usually the accompaniment of storms, although a careful study of this relation for several years shows that when a storm is of several days' duration, the period of depression exists only for a short portion of that time. However that may be, for the school children studied, misdemeanours were excessive for low barometrical conditions, and deficient for high ones.

Humidity.—The general tendency of this meteorological condition is to indicate an excess of demerits for conditions of low humidity, compared with the numbers shown for a moister air. Judging from the answers to the Syllabus with respect to the effects of "muggy" and "sticky" weather, I am inclined to think that this showing will be something of a surprise. The curves resemble each other so closely in their general tendencies that when we consider that nearly 100,000 data were made use of in their construction, we can hardly doubt their validity. Of the special curve under consideration, the marked fluctuations for both the end groups may or may not be due to accident. The curve coincides wholly with the condition which we find for the character of the day and precipitation, as all these show deficient numbers of data for conditions of moisture. Our inference from this curve must be that excessive restlessness, together with those activities of mind and body which, in the judgment of the teacher, constitute disorder, increase with increasing dryness. Yet a dry atmosphere is recognised, the world over, as a vitalizing one, having the bracing properties which we all recognise in certain characteristics of weather. A logical conclusion for the two conditions stated is that bracing conditions of atmosphere and an excess of activity accompany one another, or, to carry the logical process a little further, that those activities depend upon and are the result of excessive vitality.

Wind.—The effects of the wind upon the emotional states of the various classes of individuals studied by me have been something of a surprise. In spite of the fact that we so frequently hear people deploring conditions of considerable movement, and asserting that the "wind makes them nervous," the curves taken as a whole fail to show that high winds for the climate of New York have any effect disastrous to mental quietude. In fact, these effects seem to be the reverse, for, in spite of many fluctuations, increasing as the data for the groups became less, the general tendency of the curves is downward, as they show increasing velocities from the 100-150 mile group. This is not so plainly marked for the curve under consideration as in some of the others for adults, yet that portion for movement above 500 miles indicates noticeably less misdemeanour than that of the 350 miles preceding. The marked deficiency for the lowest movements recorded have been discussed somewhat fully in "A Study of Calms" (*Popular Science Monthly*, April, 1902). I believe it to be due to a depletion of atmospheric oxygen due to the life and other combustion of a great city, not relieved by proper ventilation through wind movements.

Character of the Day.—Surprising as it may seem to the many who have expressed their opinions in answer to the questionnaire sent out, on cloudy days the deportment in the schoolroom was better than on those of any other character, if we may judge by the number of demerits given. We might be inclined to be sceptical as to the validity of the curve, even though it be based upon the tabulation of 100,000 or more actual observations, and still prefer conclusions from our experience, did not all the other curves (blanks excepted) show a similar deficiency of the conditions studied for cloudy days. Whole articles have been written, based upon the supposed observation that the devil openly stalks abroad on gloomy days, and that crimes are multiplied under such conditions.

Dickens could hardly find sufficient excuse for a suicide or a tragedy of any sort except under the gloomiest condition of weather.

For the curve under consideration, partly cloudy days have quite a marked excess (9.8 per cent.); fair, about the *expected* number; and cloudy, the deficiency referred to.

It is possible that we should ascribe this deficiency to the relaxing or devitalizing influence of gloomy weather; that under such conditions the children, as a class, lacked the energy to become disorderly, and were comparatively quiescent, even though they were not intellectually energetic enough to do their best work. If we had a special marking system for inattention, or if I had been successful in obtaining the much desired daily marks for the class work, I am inclined to think that this hypothesis could have been proved. As it is, the work remains to be done. Marks for deportment would not be likely to show such conditions, except in a negative way, and this, I think, we have here.

Precipitation.—The relative number of demerits given upon rainy days and upon those in which there was no precipitation is what would be naturally expected from the study for the character of the day, that is, an excess for dry days, and a corresponding deficiency for rainy days. Since fair days are usually of the former character, and those on which there is precipitation of the latter, what has been said of them is valid for our present topic.

In conclusion, I would say that I recognise the limitations of this method of study. By its very nature each meteorological condition is treated as if the others were not at the same time potent. This fact would, however, introduce no error unless two or more tended to vary simultaneously, in which case the effects of one might be imputed to another. If all tended to vary without fixed relation to one another, the showing for each would be valid, and a careful study of weather fluctuation seems to show that this is largely the case. I recognise also that however great weather effects may be, we cannot hope to change the weather. We may, however, in some cases, hope to shield the child from its direct influence, and, still more important than this, through a knowledge and recognition of such effects, so modify our demands upon the child as to make more rational our solution of the perplexing problem of school discipline.

(1) Other articles published by me on the general question of weather influences are as follows,—this, in a way, is a resumé of those bearing upon children's deportment,—"Conduct and the Weather," Monograph Supplement, No. 10,—*The Psychological Review*; *The Pedagogical Seminary*, April, 1898; *The Scientific American Supplement*, June 3rd, 1899; *Science*, August 11th, 1899; *Appleton's Popular Science Monthly*, September, 1899; *Educational Review*, February,

1900; *Nature*, February 11th, 1900; Annals of Am. *Academy of Political and Social Sciences*, October, 1900; *Popular Science Monthly*, April, 1901; *International Journal of Ethics*, July, 1901; *Popular Science Monthly*, April, 1902; *Proceedings, American Psychological Association*, December, 1902; *Proceedings, International Congress of School Hygiene*, Nurenberg, April, 1903; *Weather Influences* (pp. 286, plus 31), New York, 1904.

The Training of Children under Five in Elementary Schools.

Paper read at Manchester for the Child-Study Association, on November 7th, 1905.

By MRS. FLORENCE KIRK, M. R. San. I.,
Head Mistress, Belle Vue Infants' School, Bradford.

I understand that at the last Meeting of this Society you discussed the question of the "Exclusion of Children under Five years of age from Infant Schools," and that you voted unanimously against it.

Since attention was first drawn to this matter, by the suggestion that the grant for such children should be withdrawn, the question of exclusion has been discussed in many parts of the country, and the majority of people seem to think that it would be very unwise to take such extreme measures.

One good result has been to call attention to the absurd curriculum which has been in vogue in many Infant Schools, and to expose the folly of mechanical teaching with young children.

It is difficult to say on whom the blame should fall for such a state of things, but it is a fact that many earnest teachers have not been allowed to use their common sense in their dealings with children, and to those who have long been striving for a better training for Infants, the recent "Code" and "Suggestions to Teachers" and "Reports of the Women Inspectors," issued by the Board of Education, are heartily welcome, for there seems to be no reason why intelligent methods should not have full play in Infant Schools in the future.

At present there are three obstacles in the way, which it is the duty of teachers and managers to endeavour to remove, viz.: First, the inadequate accommodation in many schools; secondly, the large size of the classes; and thirdly, the qualification of the teacher.

The first two—accommodation and size of classes—are outside the teachers' power to alter, but the third is surely in her own hands. There is now every facility for teachers to improve their knowledge as to the best methods of teaching children of tender years. In Manchester, for instance, there are the Froebel and Child-Study Associations, and a wealth of literature on the subject within reach of all.

I do not agree with the statement that "an untrained teacher is the best baby-minder," for I think the work of Infant Teaching is special work, and that teachers should be trained specially for it, and know that in Manchester you have presented a Memorandum on the subject to your Local Authority. In Bradford we have done the same, in the hope of some improvement in the future.

Owing in great measure to the presence of educational experts, including ladies, on the late Bradford School Board, I was allowed for several years to work my school on modern lines, and, I presume, it is on account of the successful result of this experiment that I have been invited to come and describe it to you.

I do not claim that the School is an ideal one in all respects, as the premises are old, having been erected since 1877, but a few comparatively simple alterations of furniture and fittings have made it possible to work on entirely different lines, with increased pleasure and profit both to pupils and teachers.

The photographs to be shown on the screen have been taken at different periods, to illustrate the various kinds of work and the arrangement of the rooms, and, I hope, will give a clearer idea than would be possible with mere description.

The wonderful industrial success of the United States of America is attributed to the intelligent educational methods in vogue there. Americans have apparently realised and acted up to the statement that "only the best is good enough for children," for they believe thoroughly in the value of Kindergarten methods.

The impression of most English Elementary School Teachers is that the Infant School is a place where the child must be prepared for the work of Standard I., which is often interpreted to mean that he should *do* the work of Standard I., instead of a place where he should be trained for right living and thinking.

The old advice of "a sound mind in a sound body" is as true to-day as many years ago, but many seem to overlook the fact that a child begins life with the possession of physical powers only, and that his *mental* growth is entirely dependent upon his physical development.

We hear of a " Kindergarten Alphabet for the use of the Babies ! " and yet the alphabet has no place in a true Kindergarten. Why should a child be taught to read before he has learned to talk and to exercise his senses ? Is this Nature's method of education ? Let me quote from a recent edition of *School Hygiene* on this point :—

*" Age has a most important bearing on the character, amount, and distribution of the work to be given to children. During the period of *childhood*, up to the end of the seventh year, more rapid changes are taking place than at any subsequent period of life. At seven years of age a child weighs about six times as much as at birth, and has more than half the stature and one-third the weight of an adult, while its brain at the same age has attained nearly its full size. This does not, of course, imply that it is fully developed. Practically, no book work should be attempted during this period. Education is not confined to schools. From the first moment of life, Education, in the best sense, commences, and makes rapid strides. The senses become trained, and the powers of observation are perhaps keener than at any subsequent period, while the mind is becoming stored with impressions which *form the ground work of subsequent mental life.*

†" At the age of three the child may be taken to have learned to stand and walk, but at this age it may still require to have these co-ordinations trained. Coarse muscular exercise in moderate amount, and frequently repeated daily, for short times, marching, hopping, jumping, etc., are useful forms of training at this time of life."

(Similar movements are advocated by Froebel in the *Mother Play-Book.*)

" The movements of the eyes in watching distant objects should be chiefly used, and until five years of age only the coarse muscle movements, such as are concerned in running, jumping, and swimming, and those of the shoulder, girdle, and arms should be *definitely* worked.

" If children in the Infant School are allowed to work with small objects, they cannot possibly be prevented from the habit of working at too near a distance, and if they are allowed to do fine work, it is impossible for teachers to make them sit up from their work.

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* *School Hygiene*, by Newsholme, Pakes and Kerr. Published by Swan Sonnenschein and Co., 1903. Chap. II., p. 18.

† Chap. II., p. 20.

" Such work also implies fine finger work, and the nerve groupings which are concerned with finger work are so immature, that children under six can only do it inco-ordinately and badly, and with immense strain and rapid exhaustion.

" Children at this stage, *i.e.*, four to six and seven years of age, should never be allowed near eye-work or finger-work ; for such children the only graphic forms permissible are chalk-drawing and writing on the blackboard, while work with sand-trays, big bricks or sticks, big beads or shells, should entirely replace any finer work."

‡ " Premature school attendance tends to 'force' functions of the brain (which should only come into activity at a later age), and so favours mental deterioration. It also greatly increases the liability to near-sightedness and general ill-health.

" The collecting together of sixty or seventy infants, at ages when they are more prone to be attacked by infectious diseases, and when these attacks are more fatal than at any later age, results in a large loss of human life."

What I have quoted will show that children under five years of age should have similar treatment at school to what they would get at home under proper conditions.

They should have no formal instruction, but should be allowed every opportunity for the full development of their physical powers. " The education of the senses must precede that of the mind." In the order of time it comes first, the memory next, then the understanding, and, lastly, the judgment. When the education of the senses is neglected, all subsequent education has a haziness about it which is almost irremediable.

The Kindergarten System, when its principles are properly understood and applied, cultivates the senses and powers of observation, comparison, proportion, and construction in early life, and has therefore a high educational value.

Froebel's principles for the Kindergarten may be briefly described as follows :—

1.—All the faculties of the child are to be drawn out and exercised as far as age allows.

2.—The activity of children is to be made use of by manual work, which should be largely creative in character, and which is valuable as a means of self-expression.

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‡ Chap. II., p. 26.

3.—The senses are to be trained to accuracy. The child must learn how to observe and how to reproduce what he sees, in some form or other.

In the real Kindergarten the child learns intuitively the inter-dependence of all things. He is brought into the world of nature by actual contact with things, and he learns reverence for the Creator of all living things.

His social instincts are developed by Games and Group Work, and he learns proper consideration for others. The simultaneous training of head, heart, and hand are the most striking characteristics of the true Kindergarten. If children could spend two years in a good Kindergarten, they would not only bring to school those elements of knowledge which are required, but would know in some degree how to learn, and have at their command an extensive and correct vocabulary.

It should be our aim to see that children have a "*proper*" childhood, and not to treat them while at school as little men and women. "A child who has a happy childhood is made happy twenty years afterwards by the memory of it." We should lengthen this period rather than shorten it, for it is a great growing period, and *forced* development at one stage of life means *arrested* development at a later stage.

It is folly to think that formal instruction in the three R's in the Infant School is advantageous to those children who leave school at thirteen or fourteen years of age. What a child really needs is *experience* of things in order that his mind may gain *ideas* to form a basis for instruction, for only then is he able to understand what he is being taught. The children from three to five years of age are mere babies: they cannot walk or talk properly, and in many cases are unable to attend to their personal needs. The State allows these children to attend school, and pays a grant upon their attendances—therefore it is only reasonable to expect that proper provision should be made for their training. This should be on the lines of a good home training: they should have ample space, and opportunity for movements of various kinds. There should be toys and various materials to handle and experiment with, without undue interference. The room should be tastefully adorned with pictures, flowers, etc., in order to cultivate the æsthetic instincts. The number of children under the control of one teacher should not be too large—thirty-six should be the limit.

From the first, these children should be trained in proper habits of cleanliness, order, tidiness, obedience, clear speaking, etc. It is impossible to over-estimate the value of keen and accurate perceptions, and as *first* impressions, or, rather, impressions received during early years, are always the most durable, we should take care that the first impressions are as clear and definite as possible. If this were insisted upon in Infant Schools, much of the haziness which at present characterises the compositions and speech of older children, and even of adults, would disappear.

I should like to refer at this point to the teaching of *correct names* to children of three and four years, instead of the baby-talk which is so often considered necessary. It is an insult to a child's intelligence to *tell* him that a *horse* is a "gee-gee," a *train* a "puff-puff," and so on. He is quite capable of inventing such names for himself, and will learn the correct name from us quite as easily and pleasantly as the baby names, and this is the first step towards acquiring a correct vocabulary. We should be very careful to see that the name is associated with the object for which it stands, for the child must have actual experience of things before names.

The most important subjects for this period of school life are:—

1.—Stories and Conversation Lessons.
2.—Games, Physical Exercises, and Singing.
3.—Toy, Object, Picture, and Nature Lessons.
4.—Suitable Kindergarten Gifts and Occupations.

The work should be grouped around some central point, selected beforehand by the teacher, and in accordance with the stage of development reached. The underlying principle should be to begin with what is nearest and in actual contact with him, and extend on all sides to other things in association. By these means he is trained unconsciously in good mental habits, his memory is strengthened, and his store of knowledge increased.

The teacher cannot have too many *stories* in her répértoire, but care should be taken in the selection of them. Little anecdotes of animals, pets, things one has seen, are always interesting. Nursery Rhymes and Tales, like *Bo-Peep*, *Boy Blue*, *Mother Hubbard*, *Robinson Crusoe*, *Henny Penny*, and *Three Bears*, are always enjoyed, but it is not desirable to keep solely to this class of story. They should be gradually led to appreciate good literature. I have found the story of *Alice in Wonderland* an unfailing source of delight to even such young children, when told with taste and feeling. The children should afterwards be encouraged to dramatise these stories.

Conversation Lessons and Morning Talks on different subjects connected with the work should be taken daily, the children encouraged to talk freely and to express themselves correctly. In the *Games* they should be free and as natural as possible, and should frequently suggest how they should be played. *Singing* should be very carefully taught. From the first a soft tone should be encouraged, and great attention paid to a proper production. A good plan is to let the children who can sing nicely show the others, and to encourage all to sing individually. Great care and patience are required, for the chief fault lies with the ear—they do not listen carefully, and therefore cannot imitate correctly. Good ear-training is the first thing to aim at, and this is only obtained by soft singing and plenty of imitation.

Toy, Object, and Nature Lessons should never be given without the actual things, and the children should handle them and find out as much as possible for themselves, the teacher adding information only when absolutely necessary.

There should be a plentiful supply of pictures illustrating various subjects. These are best kept either loose, in a large case, or fastened together in folio form, or pasted into a large scrap book, which can be hung up in front of the class. They do not then gather the dust or lose their freshness, and are easy to get when required. The *pictures* used for decoration should be framed. Only a few good ones are necessary, and if these have a loose back, the pictures inside can be frequently changed.

Pictures made by the teacher, illustrating the work taken, are the most interesting, and also serve as useful records of the year's work. For this purpose I suggest a large sheet of good, dark brown paper, and a plentiful supply of good chalks and crayons, of various colours. If this sheet of paper is pinned on to the blackboard, and the picture built up in front of the children (each object as it is put in being made the subject of the lessons, etc., for the day), the children have a real, living interest in it. Such a picture takes several weeks to complete, and when finished can be fastened to the wall until the end of the term or year. I can testify to the value of such pictures from actual experience. The children's *Drawings* should be either in sand or on wall blackboards, and no fine work should be attempted.

Colour should also receive careful teaching, as these little ones have a very acute perception of the various colours, and valuable training in observation can be given.

The materials used for "*Occupation*" Lessons should be large, so as to cause no strain upon fingers or eyes.

(I may here mention that Messrs. Arnold, of Leeds, have in course of preparation a series of apparatus specially designed for the needs of such children. The small chairs were specially designed by Dr. Kerr, now Medical Superintendent for London.)

It is necessary to remember that, in addition to all these schemes and apparatus, there is one factor of more importance than all, and that is the *personality* of the teacher. The enthusiastic, capable, and resourceful teacher can, to a very large extent, create the ideal environment, but no ideal environment can create the ideal teacher.

In conclusion, I wish to say a few words about the desirability of a daily sleep for these children. It is difficult to convince mothers that their little ones will sleep quite as well in the night, and even better than at present, for having a mid-day sleep. A half-time session, for which I have often pleaded, does not seem practicable in many cases, and in most schools it is impossible to provide accommodation for sleep. In my school we have an interval of two hours between morning and afternoon session, and I have persuaded several mothers to encourage their children to have a sleep in the dinner-hour, and I am glad to be able to report that it has proved very successful. A certain afternoon per month is set apart for mothers to visit the school, in order to discuss matters affecting the welfare of their children, and the result has been a closer connection between the home and the school.

The Time-Table and Schemes of Work subjoined are copies of those in actual use at the present time.

ANALYSIS OF TIME-TABLE,

shewing the time given per week to the various subjects.

	Hrs.	*Mns.*
Devotional Exercises and Scripture	2	30
Recreation (a.m., 15 min.; p.m., 10 min.)	2	5
Physical Training (including Marching and Physical Exercises)	5	25
Morning Talks, Conversation Lessons, Toy and Picture Lessons	5	10
Varied Occupations	3	35
Games	2	20
Recitation	1	25
Music and Singing	1	0
Drawing		50
Stories		40
Total	25	0

Morning Session, 9.0 to 12.0; Afternoon Session, 2.0 to 4.0.

TIME-TABLE FOR CHILDREN UNDER FIVE. BELLE VUE INFANTS' SCHOOL.

	9.0 to 9.25.	9.25 to 9.45.	9.45 to 10.0.	10 to 10.25.	10.25 to 10.50.	10.50 to 11.10.	11.10 to 11.30.	11.30 to 11.50.	11.50 to 12.0.	2.0 to 2.10.	2.10 to 2.25	2.25 to 2 55.	2.55 to 3.15.	3.15 to 3 30.	3.30 to 3.50.	3.50 to 4.0.
Monday.	Assembly Hymn and Prayer, followed by Scripture Lesson.	Physical Training, including a run out to conveniences and Marking of Registers.	Morning Talk on Various Topics.	Varied Occupations Building Bricks, etc.	Dressing to go out to play. Outdoor Recreation. Taking off Outdoor Clothing.	Recitation.	Game.	Picture Lesson.	Dressing to go home, and Dismissal. A short Grace sung.	Physical Training	Conversation Lesson and Marking of Registers.	Varied Occupations Paper Work.	Dressing to go out to play. Outdoor Recreation. Taking off Outdoor Clothing.	Recitation. In Main	Games. Room.	Dressing to go home. Dismissal Hymn and Prayer sung.
Tuesday.	"	"	"	Varied Occupations Sticks, Laths, etc.		Conversation Lesson. In	Singing. Main	Story. Room.		"	"	Object Lesson and Drawing on B. Bd.		Conversation Lesson.	Games.	
Wednesday.	"	"	"	Varied Occupations Seeds, Beads, Shells, etc.		Toy Lesson.	Singing.	Games		"	"	Varied Occupations Building, etc.		Recitation. In Main	Games. Room.	
Thursday.	"	"	"	Varied Occupations Paper-Work.		Conversation Lesson. In	Singing. Main	Games. Room.		"	"	Object Lesson and Drawing on B. Bds.		Conversation Lesson.	Games.	
Friday.	"	"	"	Varied Occupations Sand or Clay.		Recitation.	Object Lesson.	Drawing in Sand or on B. Bds.		"	"	Varied Occupations String Sticks, etc		Recitation.	Story.	

Remarks on Time-Table.

The children under five have their outdoor play at a separate time from the older children. This allows them to have more freedom, and enables the teacher to observe them more fully, and to correct any bad habits. Four times a week (on two mornings and two afternoons) they take their Singing and Games in the Main Room. This allows of freer movement, and also provides a change of scene. Time is allowed on the Time-Table for putting on and removing outdoor clothing, under the teachers' supervision. Children should be trained to do this for themselves, under careful guidance, and the time for outdoor recreation should not be curtailed. A run out to the conveniences is also provided for towards the end of the first hour in school.

SCHEME OF WORK FOR CHILDREN UNDER FIVE.

Morning Talks, Conversation Lessons, Toy, Object, Picture and Nature Lessons.

1.—Pictures and Conversation about Spring, Summer, Autumn, and Winter, and the fruits, flowers, etc., in season.

2.—Talks about Current Events, daily occurrences, personal habits and conduct, etc.

3.—Various Objects in School and Class-Room.

4.—Things mentioned in Songs, Recitations, Games, etc.

5.—Familiar objects in connection with doll's house, *e.g.*, chair, table, window, etc.

6.—Various toys in doll's house and in school.

Stories.—Simple stories in connection with above subjects. Nursery Rhymes and Tales, Stories from Hans Andersen, told in simple language, *e.g.*, Ugly Duckling; What the Moon saw; Little Tin Soldier; The Fir Tree; Snow Man; Alice in Wonderland.

Scripture Lessons.—Simple Stories from Old and New Testament. Simple Hymns.

Music and Singing.—Imitation of Sounds; Voice, Ear, and Breathing Exercises. Hand Signs of Doh Chord. Simple Songs and Games. Song Books recommended. *Song Stories for the Kindergarten* by Mildred and Patty Hill. Curwen. 2/6.

Songs for Little Children, by Eleanor Smith. Curwen. 3/6.
Finger Plays for Children, by Emilie Poulsson. Curwen. 2/6.
Music for the Kindergarten. E. Heerwart. Boosey. 2/6.
Mutter-und-Kose Lieder. F. and E. Lord. Rice. 2/6.

NOTE.—Games and Songs as suggested will be found in these books, which are not expensive. Those selected should be short and simple in words and tune, and the number and variety should not be limited.

Recitations.—Simple Recitations in connection with lessons and games. Care should be taken in the selection. Nursery Rhymes are useful at first, and the children should be allowed to act them. They should be conversational in style, and suitable actions should be employed, *e.g.*, "Where did you come from, baby, dear ?" "How many miles to baby-land?"

Games.—Ring Games, Ball Games, Finger Plays, with and without music. Guessing Games, *e.g.*, Hide and Seek, Hide the Thimble, Dear Friend, Listen ! Kindergarten Games, *e.g.*, The Pigeon House, Little Bird, you are welcome. The Wind, etc. Traditional Games. Dramatised Stories and Rhymes. Free Games invented by the Children. Movement plays of all kinds.

Drawing.—1.—Simple exercises in Sand, using both hands. I do not recommend the use of a wooden stick, as the children cannot be taught to hold it properly—the forefinger is preferable. These lessons should be connected with Stick and String Laying Lessons (see *Elementary Lessons in Free Arm Drawing*, by Florence Hewitt. E. J. Arnold, Leeds. 3/6.) 2.—Free Drawing of Objects, etc., with Chalk, on Wall Blackboards. 3.—Free Illustrations of Story, Game, Recitation, etc.

Form and Colour Lessons, in connection with Varied Occupations. To be able to recognise the six Rainbow Colours, and to name them. To know Straight, Curved, Upright, Level, and Slanting Lines, Circle, Square, Triangle.

Physical Exercises.—In addition to the Games, the following may be practised regularly, *i.e.*, for a few minutes every morning and afternoon. Simple exercises with feet, body, limbs, head, and fingers, without music or apparatus. (See Miss Roper's Book on *Swedish Drill*.) Various marching, running, tripping, jumping, walking, and skipping exercises, with music.

Kindergarten Gifts and Occupations.—Gift 1, with Songs and Games. Gift 2, with Songs and Games. Gift 3, with Songs and Games. String-Laying, using thick string, about 16 inches long. Stick-Laying, using sticks two inches long. Shell, seed, and bead laying, using large material. Bead-threading, with large beads and string. Paper Ball making. Free Paper-Cutting. Modelling in Sand and Clay, to illustrate Object and Conversation Lessons.

Reading should not be taken with children under five, but the Conversation Lessons, etc., should be a preparation for it. Children should be able to talk very well before they begin to learn to read.

Arithmetic, or Number, is taken incidentally with the Gifts and Occupations, but there should be no formal lessons.

Writing has no meaning to young children, and therefore should not be taken. Plenty of practice in Drawing is the best preparation for it.

Sewing of any kind should not be taken at all, as it causes strain upon fingers and eyes, and children can be more profitably employed.

The foregoing Time-Table and Scheme of Work are copies of those actually in use at the present time in an Elementary Infant School, with an average attendance of over two hundred children, the number on roll under five being about fifty, in charge of one teacher.

The Method of Nature is the Archetype of all Method.

By Mr. E. Cooke.

(Continued from Vol. VII., p. 152.)

We must study the paintings for ourselves. The colours used are black, brown (sepia), and red. The red sometimes seems changed or faded, or there may be two reds, one vermillion or Venetian red, the other more purple, like Indian red or vermillion exposed to the air. The animals, birds, figures, and other forms, are drawn with a firm definite outline, which is often incised or cut into the clay with a pointed instrument. Flat colour, without light and shade, is the rule, without exception. There are no cast shadows: no shadows at all, only line and even colour. The best Greek painters probably used light and shade, for Pliny says the hand holding the lightnings in the portrait of Alexander, as Jupiter, quite stood out of the picture. The forms themselves, and their arrangements, are simplified, just as they are in children's drawings. Objects are placed side by side, not one behind another; later, when the drawing is more perfect and the artist more skilful, more is attempted. There is the same pleasure, too, in complex forms and human subjects, in animals and figures in action; hunting and fighting scenes are frequent.

The drawings are evidently from imagination also. A fine archaic Rhodian plate (6th century B.C.) has a central subject which shews this—Hector and Menelaus fighting over the body of Euphorbus.—Heads and legs are drawn in profile, but the body is turned to the front, as in Egyptian and children's figures. This seems to point to a common origin in the mind, not to imitation of outer nature. The names of the heroes are inscribed beside them. Children still often write the names of objects beside their drawings.

The beginnings of art everywhere present similar characteristics, but it is easier for us to follow that of Greece, and it is encouraging to see the highest art begins with the simplicity of a child s drawing. Pre-historic man has drawn his contemporaries, the mammoth, deer, and other animals, nearly as well as the archaic Greeks. He has drawn them, too, with an incised outline, with the same simplicity, and in the same positions.

There seems to be a parallel development of art in the child and in the race. They begin and proceed in a similar way. Both use drawing to express ideas; both use line, outline, and flat colour. They delight in the same kind of subjects, animals and figures, and these in action. The forms of both have the same simplicity; they are arranged, and, more remarkable, still they err in the same way. This shows clearly they do not draw from life directly, but from their ideas or imagination. For centuries men were content with simple figures, similar to children's. The conclusion seems clear: the development of art in the race is in principle and practice the same as in the individual.

Difficulties in Nature Teaching.

I was led to these conclusions through difficulties in teaching young children drawing from nature and objects. The Education Society asks its members to bring before it difficulties in teaching and studies of child nature. The actual facts are required. I give them :—

A boy, M——, about seven years old, was troublesome, inattentive, indifferent in the drawing class. His friends said he liked drawing, and often amused himself with it. This seemed to indicate taste, perhaps talent, and they thought lessons would help and develope him, but he disliked the drawing taught at school. They sent drawings he had made for his own pleasure, of birds: these were partly copied from books, but were not accurate, they were not strictly copies, for he modified the drawings to suit his notions. He wanted to express his own ideas, not to imitate the drawings in the book. He wanted a bird flying in a certain way but he could not do it, none could be found in the book to suit him: so he modified and adapted the drawings in the book: he used them to help his imagination to express his own idea.

This seemed to me entirely wrong: it was not going to nature, but to books and imagination. I held that drawing should be from nature, from real objects, but the boy went to copies and altered them to suit his imagination.

Twenty years before (1885), Mr. J. Ruskin formed a class, which I at once joined, on what seemed to me true naturalistic principles, and after ten years of broken, irregular study, it was my duty and privilege to teach one of his classes for ten years more. The students were interested and worked by themselves. I was specially appointed to Withenden because of these strictly naturalistic principles. Mr. C. H. Lake believed if teaching was right, it would be interesting: the whole boy would be employed, and he would be neither inattentive nor play.

There was something wrong. The question, "How should young children be taught to draw from nature?" demanded an answer. Apparently I did not know, and I had pretended I did.

In the Ruskin class none were under fifteen years of age. "There are no outlines in nature," said the master: therefore all were expected to draw without outline. "Mass only is seem," therefore finish perfectly one small part first, then the adjoining part, until, each part finished by itself, the work is completed.

Everyone began by drawing a white ball. The delicate gradation of light and shade being most carefully imitated with a very hard pencil, white plaster casts of natural leaves followed, and then natural objects: leaves, birds, and shells.

Try this with a boy of seven. Give him a white plaster ball. Tell him to make no outline, but to draw the shadows only, and to graduate them evenly with a hard pencil, and wait the result.

Simple general form will not interest him: he wants outline only, and no light and shade. His shading will soon indicate chaos. Soldiers fighting, or ships sailing, interest him. Drawing is to him a natural means of expression,—not light and shade.

The Early Greek's drawings were so like children's; he was given Hector from the Rhodian plate, he was interested, liked it; to draw and paint a hero, fighting, employed him fully—he had no time to play.

The principle supported by Educators.

These principles have wider application, and are supported by Educators. Marcel says: "Nature, the archetype and source of all perfection, is on this point, as on every other our best guide. She shows us, by the successful manner in which we learn our native tongue, how we ought to proceed in the study of a foreign language. This fundamental principle needs to be proclaimed loudly and repeatedly, for although the most important, it is the most neglected."

He also points out a similarity in the nature and objects of drawing and language. Both arts involve corresponding action of the physical and intellectual power engaged. In each the same mental qualities are required.

If the method of nature is the type of all method, the practical question arises: Can a natural method of teaching be followed in school? and if so, how? In Science something is done, in drawing but little. Ruskin's naturalistic method is unnatural to the child. His later advice is: "You should, with your own eyes and fingers trace, and in your own progress follow, the method traced for you by the great schools"; get command of line, limit with *absolute correctness* the form or space intended, get command of flat tints, and then add the drawing that will express texture and undulation. This advice is the reverse of ordinary methods, but the first reason to be given for it is, "this method is a natural one." "All great artist nations have actually learned to work in this way, and I believe it therefore the right, as the hitherto successful, one." It is for this I am contending, but there is much more than line and colour on which nothing is said. Possibly, when the "Laws of Fesole" are completed, there may be more.

Every teacher who perceives these principles can find some application of them for himself with the help of children. But whatever is done, whatever the means or the exercises, all should be adapted to the capacities and the nature of the pupils. Here are some suggestions and questions:—

Practical Suggestions for a Natural Method.

We must go to nature, but children do not draw from nature. Should they be taught to do so? How, and when? Should copies be given? What kind of copies? and in what way? If accuracy is to be insisted on, they must be adapted to the child's capacity. Copies are products of man's art, and are not natural. The child goes to drawings for help, not to imitate them. Authority says: Give children the best work to copy. Experiments do not support authority. A child was given a cast of the head of Apollo Belvedere to draw: to give her a copy of it would not be to give her the best work. She did not like it much, but authority knows best for children. She replied by simplifying the features she went back at one bound to the beginning, and converted the masterpiece into an archaic profile. It is useless to give copies or objects far beyond the child's powers—they should be on its own level. To make them imitate accurately the rapid shorthand touches by which a master suggests texture, light and shade, and general truth,—a practice common in popular drawing books of animals,—before they understand what such signs stand for, is of little use. Plain simple outline and flat colour are suited to them, like the early Greek drawings; animals, birds, men and women, and other things around them, might be treated in this way.

As young children do not draw from nature till they have reached a definite stage, what do they draw from? The figures are their own. Authority says they are imitations. M—— gives, perhaps, a clue; he wanted to embody his own ideas, and was helped by the pictures in a book. Drawings similar to their own, and perhaps good conventional figures may be needed for a time, but children will give them up naturally when the greater beauty of form in nature is perceived. The mind changes with growth; perception of light and shade, of gradation, of perspective, and other matters, come later.

Little children like to draw from memory or imagination: this natural means of expression should be taken advantage of; such drawing is, indirectly, from nature as well as from themselves; however rough it is, it should be encouraged. Children draw for play: play with them at drawing. There may be different games. Let each, in turn, name an object to be drawn by all, or limit the drawings to things in the garden, field, kitchen, house, or to animals in the Zoological Gardens, to flowers or to birds known, or to any subject interesting and familiar to them.

Exercise memory, too, and in various ways. Limit the time an object is shown, then draw it. Place a simple object on the table, in the hand, or anywhere it can be seen easily, for one minute, or half a minute. Let no drawing be done while it is visible. Concentrate attention on it. Say, "Look at it well"; then count, "one, two, three," and take it away or hide it. Then let the children draw it, and compare drawing and object afterwards. They will enjoy the game.

Draw the same object from memory again next day, a week or month afterwards.

To exercise imagination, give a subject for illustration, a nursery rhyme, a line or two of poetry; tell a fairy tale or story, or read one dramatically, and put life into the reading. These illustrations will include figures, and should do so. Any subject that interests children, or subjects from their other lessons, are most desirable, for this reason, among others—ideas are already formed.

Let no consciousness of weakness, no imaginary inability, no disgust at the shocking drawings made, deter anyone from attempting these illustrations. Be not afraid of drawing the human figure from imagination, however rude or archaic it may be. The earlier a beginning is made the better. Little children are content with little: they are delighted with the gnome that disgusts their elders. Their figure grows with them: it comes from within themselves, and it is far better for them than the imitation of conventional forms, although, possibly, such forms may help them. The attempt to express ideas will probably lead to observation and to frequent reference, perhaps to drawing from nature directly, but if not, it will help to correct and complete imperfect ideas, and to store the mind with knowledge. Even copies cannot be rightly imitated unless they are understood.

The help a teacher can give directly will be but little, compared with what the child can learn and do by its own efforts. But by sympathy with it, by entering into its ideas, by not laughing at its doings scornfully, by placing beside its imperfect drawing one similar in character, but a little better, by always adapting the teaching to the child's powers of reception, and, possibly, by presenting works or copies on the child's own level or a little better, the teacher can help it; or if it is the idea that is incomplete, he may recall forgotten or unconsciously known facts, by talking over the subject with the class. The man has no arm, or he has but one. Why? He has six fingers on one hand,—how many have you? Appeal to knowledge and to nature, to seen and to partly remembered things; talking together will make ideas clearer, and drawing therefore better. To help the child to help itself is the right work of the teacher.

To help it to master its tools and materials, and to provide exercises is in the teacher's power. Encourage children to draw with outline and colour, or to draw with colour at once, without pencil outline. This is capital practice, either with the point of the brush for lines or for broad washes, which can be modelled into form at the edges while the colour is wet. Possibly, oil colours would be better for this, they are longer plastic, and are not made so uneven by touches when wet. (White body colour mixed with water colours have a like value.)

Of course, drawing should be interesting. But the drawing of straight lines, which is so often imposed on beginners for a long time, is not in itself interesting. But if the lines are means, not ends, if they are used for representing forms, however simple, or for invention, however commonplace, the dull lines, with these additions, become full of interest; but this interest is not in the line alone, nor in its execution, but in the thought or invention associated with it.

Geometry is responsible for much trouble. Children sympathise with humanity, animals and flowers, and are pleased with their forms. Geometric form is erroneously considered the foundation of all natural form, but geometric form is not complete without organic form. Prof. Ruskin insists on the fact that the noblest races, from their first efforts in art, show sympathy with organic nature, not with Mathematics. "The law which it has been my effort chiefly to illustrate is the dependence of all noble design in any kind on the sculpture or painting of organic forms. This is a vital law lying at the root of all I have tried to teach respecting architecture or any other art. It is also the law most generally disallowed" (*The Two Paths.*)

He does not notice—it is not his business—that children like, best of all, to draw figures, as the early artists did in all schools. "The early art of Greece is full of knights and nymphs in outline. In Egyptian ornament you have everything the workman saw: people hunting, fishing, fighting, cooking, visiting, and making love. In Byzantine ornament, saints or animals, from church down to enamelled metal, figure—figure—figure—always principal. In Norman and Gothic work you have quiet saints or disquieted persons hunting, feasting, fighting, and so on, or whole hordes of animals racing after each other. Then Bayeux tapestry, with the whole history of the conquest of England. Then onwards, but more and more finished figures up to the solemn sculpture of Wells Cathedral. The moral of which is: Sketch everything from nature, but, above all, figure."

Were the archaic figures in this ancient art sketched from nature? They are like children's figures, and children draw from imagination, not from nature. Students who draw from nature object to draw from imagination. Their work is so childlike. They are not content to begin as the child, the

Greeks, and the race begin. Archaic art is rarely appreciated. "For my own part," says Ruskin, "I should always endeavour to give thorough artistic training first. But I am not certain (the experiment being yet untried) what result may be obtained by a truly intelligent practice of conventional drawing, such as that of the Egyptians, Greeks, or thirteenth century French, which consists in the utmost possible rendering of natural form by the fewest possible lines."

What Mr. Ruskin means by "a truly intelligent practice" and a "thoroughly artistic training" is uncertain. But under the artistic training we are familiar with, the work he appreciates is impossible. We must reverse the usual methods, or, at least, allow some exercise of memory and imagination simultaneously with the artistic training to make it thorough. We see continually the results of that training which does not attempt to draw out the power of expressing ideas, and it is this which really educates. How is it to be done? Is the method of nature to be followed? If so, what is the natural method, and how is it to be taught? The practice and application of the principle is not yet satisfactorily determined. Experiments are in progress. Discussion may help us much.

Our established systems of artistic training differ much from Prof. Ruskin's earlier system (1855), which was founded on "nature." This, again, differs from his last work, *The Laws of Fesole*, which recognises the historical development of art as a guide to teaching. But one essential factor is omitted from all. Drawing is not regarded as a means of expressing ideas, as race and child regard it. Drawing in all these systems is separated from thought, although nature, humanity, science, history, and the highest authorities on art and education support, and experiment confirms, the principle, that the Method of Nature is the Archetype of all Method, and in that method drawing is first of all a means of representing ideas.

NOTE.—This Paper was printed in *The Scholastic World*, November 1st, 1878, at that time the organ of the Education Society, with an account of the Proceedings. The reporter says the children's drawings were "in some cases very comical,"—their attempts to transfer the mental image of the old man running about to paper was made with "various success, but in all cases the endeavours seemed fraught with interest to the children, the expression of whose faces bore witness to the fact." The first half of the Paper was printed almost entirely; some few details are omitted here, for want of space. For the same reason the "difficulty in teaching" section is also incomplete. The "Suggestions for a Natural Method" were all new. Experiments had been in progress three or four years. The suggestions were results of child-study, which was made not for itself, but to learn how to teach naturally. Ruskin's "go to Nature, neglecting nothing," principle was extended, to include the nature of the child. Fortunately, the "difficulty" arose in the only school, probably, in which there was sympathy and help. Mr. C. H. Lake, before 1875, had used blackboards or canvasses to teach writing with a free arm. In my Botany Class, at his School, these blackboards were welcomed; drawing was for us another language; drawings from memory and knowledge, rapid impressions, and deliberate observation, supplemented speech. All the "suggestions" here made have now been adopted, more or less, in a fragmentary way. Free-arm drawing by some, Brushwork and Drawing with colour by others. Drawing from memory and imagination by one section, Blackboard Drawing by another. More knowledge of principles, especially of development, is needed to unite all, and also to make even the fragments educational.

The first part of this Paper, in *The Paidologist*, November, 1905, was, unfortunately, printed without any revision, and there are several errors, for which I am sorry. The Paper itself begins at line 15, page 148. In the Editorial notice, too, line 8, page 129, the word "not" has disappeared. It should read: "Children should not draw," etc.

E. C.

Report of an Investigation of the Teaching Power in Elementary Schools.

Believing that certain of the most fundamental questions of School Organisation urgently call for more careful examination than they have hitherto received, a Joint Committee of the Childhood and Child Study Societies (assisted by Mr. Marshall Jackman, past President of the N.U.T.) undertook in 1905 to collect data regarding the size of classes, the number of grades taught by single teachers, and the professional status of teachers in Elementary Schools.

Method of Investigation.

It was decided to select for investigation certain districts considered representative of the conditions that prevail in England generally. Considerable delay arose through difficulties in obtaining permission from Education Authorities in some districts to send enquiries to their schools. They recognized the importance of the subject, but considered either that their teachers were already over-burdened with office work and should, therefore, not be requested to furnish the required information, or that, since reorganisation was impending in many schools, a report of the kind contemplated would very quickly lose its value. To the latter argument a reply will be found at the end of this report.

As soon as permission had been obtained from about twenty districts, schedules of enquiry were sent to every school in them.

The proportion of schedules returned from the various districts varied greatly; in a few cases it did not amount to more than a third or fourth of the number distributed. Still there is every reason to believe that these adequately represent the districts from which they come. From one borough we received returns from all the schools, the Education Office having kindly issued and collected them for us.

The Schedule shows that we asked for a return of the number of pupils on the Roll and the number who attended in each class on two dates in 1904, a morning in June and an afternoon in October. We have thus been able to estimate fairly the average size of the classes for the year. For the tables appended to this report the average *of the Roll* was taken, since this represents more truly than the average of attendance the task assigned to the Class Teacher. He is responsible for every child on his Roll, and irregular attendance does not decrease, it increases the difficulties of class instruction.

The Tables of Statistics.

To render comparison easy between corresponding districts, the schools have been classed in three divisions—Boroughs, County Urban Schools, and County Rural Schools. The size of Classes is graded by tens from 20 to 100.+ Teachers are classed as—(*a*) Head Teachers; (*b*) Certificated Assistants, both trained and untrained; (*c*) Uncertificated Assistants, whether described as Supplementary, Article 68, &c.

The percentages were obtained by reducing the actual number of teachers entered in each column to the standard one hundred for the column.

Pupil Teachers and Monitors.

An explanation is required regarding the place in the Tables of Pupil Teachers and Probationers.

The Schools with the best organisation no longer include them as members of the staff, and as a rule they were not entered on schedules returned from these schools. For just comparison it was necessary, therefore, to reckon Pupil Teachers and Probationers separately everywhere. According to the Code, Authorities may reckon Pupil Teachers as counting for twenty to thirty pupils and Probationers for ten pupils; thus a certain quantity of the Classes numbering 60 children and upwards are in accordance with the regulations of the Board of Education, for Pupil Teachers are there helping the adult teacher. To what extent, in any district, the high figures may be thus reduced, may be estimated by comparing the percentage of large classes with the number of Pupil Teachers employed there. It should, however, be borne in mind that under the system of training recently introduced Pupil Teachers are of little practical use in the schools, as they may be employed for only half the school day, and the pressure of private studies permits them to do little work for the school after school hours. They are, therefore, rapidly disappearing from town schools as a recognised part of the staff.

Class Organisation.

It is evident from the percentage tables that the problems of organisation are widely different in town and country districts. The town schools are usually large and are staffed by teachers with more or less adequate training; rural schools are small and the Assistant Teachers in them (if any) are uncertificated.

In town schools the evil of large classes is common; in rural schools classes are small but teachers have charge of several standards; occasionally one teacher has charge not only of a complete school, but also of a group of infants. Two adult teachers are considered a competent staff for schools of forty to eighty pupils ranging in age from three to thirteen years.

It is very gratifying to find very satisfactory conditions prevail in two Boroughs; those marked A and N. Only 7.6 per cent. of the teachers in A and 12.4 per cent. in N are responsible for classes of more than 50 pupils. Also the Education Authorities do not reckon either Head Teachers or Pupil Teachers a part of the teaching staff. It should be possible in these schools to carry on the processes of education from the lowest to the highest classes with moderate efficiency. For in determining class limits an imperative condition is the fact that, however highly qualified a teacher may be, he cannot meet the individual needs of more than a certain number of children in the prescribed number of school hours. Each child requires a share of his attention.

To allow to each pupil the minimum number of moments necessary for asking and answering questions, reading aloud, reciting, &c., not more than forty pupils should be assigned to each class teacher; yet we find in one Borough (I) 60.85 per cent. of the teachers are in charge of classes numbering more than 50 children, and 26 per cent. of classes numbering 60 and upwards. Moreover, the staffing of these schools is still educationally worse than these figures show, for the largest classes are usually found in Standard II, I, and in the Infant Schools, grades where the children are at an age when they need the greatest amount of individual attention. In Infants' Schools classes of 70 and 80 children appear to be common, and in a few cases the numbers rise beyond 90, even to 115.

Rural Schools.

A table is appended to show the proportion of rural schools that are staffed by one, two, and three teachers. It will be seen that there are many schools in which there is only one teacher for all the Standards. In these schools the Infants from three to seven years of age are frequently placed in charge of monitresses, young girls who must at the same time concentrate their energies on private study and on passing academic examinations. Would not this feature of the problem be dealt with better by the exclusion in small rural schools of all infants under five or even six years? To give only the bare necessary instruction to children aged six to twelve years must tax the skill of two teachers. It is relevant here to note that England, probably, is the only country that admits children to rural schools under six years of age; in several countries the age of admission is seven or eight years in country schools, and six in town schools.

The Value of the Investigation.

The schedules returned bear witness that in 1904 the schools were in a stable condition; remarkably few vacancies are reported in the Staffing. (Where vacancies do occur an explanatory note has allowed the missing teacher to be supplied in the reckoning.)

In view of the fact that many Authorities are now considering re-organisation of the less well-equipped schools such an investigation as this has special value: since it aims at taking careful stock of existing machinery before proceeding to modify it.

The data collected prove beyond a doubt where lies the chief weakness in our City Schools: the congested condition of many of the lower standards and of classes in Infants' Schools. In rural schools it reveals conditions for the education of Infants that are, for the most part, quite inadequate.

The Committee issue the Report in the hope that it will assist in inducing not only Education Authorities, but also the people who support the Schools, to determine that the problems fundamental for efficient school instruction and training—the grading and size of classes—shall be the first consideration; to this all lesser questions, such as curriculum and methods, shall be subordinated.

The Committee desire to express their cordial thanks to the Education Authorities and the Teachers who have assisted them in collecting the information.

BOROUGHS.

Numbers in Classes—

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Borough H. *Number of Schools—5.*										
H. T.	No	Classes.		..	..	..	..	..	..	..
C. T.	3.8	7.6	26.8	23.0	7.6	..	..	..	..	..
U. T.	5.7	3.8	17.3	3.8	..	..	..	..	..	..
Borough I. *Number of Schools—108.*										
H. T.	.75	.75	.6	.15	.15	..	..	..	..	..
C. T.	.75	.75	4.9	11.5	23.6	14.8	3.7	.75	.3	.15
U. T.	.3	1.8	7.5	10.6	11.1	4.8	.9	.45	..	.15
Borough K. *Number of Schools—26.*										
H. T.	.6	.6	1.1	1.1	.6	..	..	..	..	..
C. T.	..	1.7	4.7	15.3	18.2	11.6	1.1	..	.6	..
U. T.	1.8	5.8	7.0	18.2	7.0	1.1	1.1	..	..	..
Borough L. ..*Number of Schools—84.*										
H. T.	.6	1.5	4.4	1.5	..	.4	..	..	..	..
C. T.	.8	3.9	15.1	29.9	12.8	3.5	..	.4	..	..
U. T.	.6	5.3	10.6	6.2	1.8	.6	..	..	.2	..
Borough M. *Number of Schools—76.*										
H. T.	.4	.7	3.9	3.7	.2	.2	..	..	..	..
C. T.	.4	3.4	9.0	20.4	14.3	8.8	3.6	.6	..	..
U. T.	1.1	2.8	6.2	9.7	7.0	1.4	.2	.2	.2	..
Borough N. *No. of Schools—13*										
H. T.	No	Classes.								
C. T.	.8	9.1	35.7	37.4	11.6	..	..	..	..	..
U. T.	..	1.6	..	4.1	.8	..	..	..	..	..
Borough O. *Number of Schools—67.*										
H. T.	.28	.8	1.1	.8	..	.28	..	..	..	..
C. T.	..	.16	7.9	17.9	24.4	20.2	2.2	.8	.28	.28
U. T.	.28	2.2	5.1	6.8	3.4	1.1	.28	.28	..	..
Borough P. *Number of Schools—70.*										
H. T.	.48	.48	1.2	.9	.48	..	.24	..	..	..
C. T.	.24	.96	7.3	14.1	10.9	3.8	1.4	.48	..	..
U. T.	.9	3.9	14.1	19.9	15.1	3.4	.24	.7	.24	..
Borough Q. *Number of Schools—13.*										
H. T.	..	..	4.2	..	1.4	..	..	..	..	..
C. T.	..	4.2	9.9	22.7	8.5	2.8	..	..	..	..
U. T.	..	5.5	12.8	14.7	7.1	55.5	..	..	..	..
Borough R. *Number of Schools—9.*										
H. T.	No	Classes.								
C. T.	..	..	40.1	35.5	15.1	6.8	..	..	..	..
U. T.	..	2.7	6.8	2.7	..	..	..	..	..	..
Borough S. *Number of Schools—4.*										
H. T.	..	4.1	4.1	..	4.1	4.1	4.1	..	..	..
C. T.	4.1	8.3	8.6	18.4	4.1	..	..	..	..	..
U. T.	8.3	8.3	12.5	8.3	..	..	..	..	..	..

Borough T.	*Number of Schools—54.*									
H. T.	.6	1.2	1.2	1.2	.6	..	..	..	..	..
C. T.	.3	1.2	8.7	16.2	25.0	21.2	4.3	..	..	..
U. T.	..	2.1	7.5	5.6	5.3	.3	.3	..	..	..
Borough U.	*Number of Schools—16.*									
H. T.	1.6	4.8	8.0	1.6	3.2	..	..	..	..	..
C. T.	1.6	3.2	6.4	6.4	..	1.6	..	..	..	..
U. T.	3.2	9.6	16.1	22.5	9.6	..	..	..	..	..
District W.	*Number of Schools—2.*									
H. T.	..	..	7.7	..	..	..	..	..	..	..
C. T.	..	..	..	7.7	15.4	..	..	..	..	..
U. T.	..	15.4	7.7	23.3	15.4	7.7	..	..	..	..

BOROUGHS.

PUPIL TEACHERS AND PROBATIONERS.

	Pupil Teachers.		*Probationers.*	
	Taking Class.	Assisting.	Taking Class.	Assisting.
Borough H.	0	0	0	0
,, I.	20	72	3	20
,, K.	12	7	0	0
,, L...	4	22	0	2
,, M.	3	46	0	1
,, N.	0	0	0	0
,, O.	16	17	0	0
,, P...	5	21	0	4
,, Q.	7	15	0	1
,, R.	0	19	0	0
,, S.	1	4	0	0
,, T...	0	25	0	5
,, U.	18	8	2	5
,, W.	1	5	0	0

COUNTY DISTRICTS (URBAN).

(The Letters correspond to Letters in C.D. Rural).

TEACHERS. *Number of Pupils in Classes.*

	20 and less.	30— 20	40— 30	50— 40	60— 50	70— 60	80— 70	90— 80	100— 90	100
District A.	*Number of Schools—71.*									
Head Teachers ..	.74	2.6	6.6	4.8	2.2	2.6	.37	.37	..	..
Certificated Assts.	.74	1.5	3.0	2.2	1.4	2.2	1.11	.37	.37	.37
Uncertificated ,,	1.1	8.8	18.0	17.0	7.0	1.8	1.8	..	..	.37

Number of Pupil Teachers taking Classes	18
,, ,, ,, assisting	33
Number of Probationers taking Classes	1
,, ,, ,, assisting	2

DISTRICT B. *Number of Schools—17.*

Head Teachers ..	1.19	1.19	2.3	3.5	2.3	1.19	..	..	..	..
Certificated Assts.	..	1.19	..	8.2	5.89	9.49	2.38	2.3	1.19	..
Uncertificated „	2.3	3.5	17.8	20.2	9.5	1.19	1.19	..	..	1.19

Number of Pupil Teachers taking Classes	3
„ „ „ assisting	11
Number of Probationers taking Classes	3
„ „ „ assisting	8

DISTRICT C. *Number of Schools—36.*

Head Teachers ..	..	1.4	4.9	3.5	2.8	4.2	.7	..	..	..
Certificated Assts.	..	1.4	3.5	7.0	12.0	14.8	2.1	..	..	..
Uncertificated „	2.1	3.5	9.9	17.0	8.5	6.4	.7	..	..	..

Number of Pupil Teachers taking Classes	1
„ „ „ assisting	9
Number of Probationers taking Classes	1
„ „ „ assisting	3

DISTRICT D. *Number of Schools—14.*

Head Teachers ..	..	3.0	..	4.6	4.6	1.5	..	..	..	..
Certificated Assts.	..	..	3.0	10.7	6.0	..	6.1	..	..	..
Uncertificated „	..	3.0	9.2	27.7	13.8	4.6	..	1.5	..	..

Number of Pupil Teachers taking Classes	4
„ „ „ assisting	11
Number of Probationers taking Classes	1
„ „ „ assisting	6

DISTRICT E. *Number of Schools—22.*

Head Teachers ..	..	3.8	7.6	2.8	6.6	1.9	..	..	..	..
Certificated Assts.	..	.9	4.7	5.7	4.7	.9	..	..	..	..
Uncertificated „	1.9	6.6	15.2	21.9	9.5	4.7	..	..	..	..

Number of Pupil Teachers taking Classes	11
„ „ „ assisting	9
Number of Probationers taking Classes	4
„ „ „ assisting	5

DISTRICT F. *Number of Schools—22.*

Head Teachers ..	2.2	4.4	5.5	7.7	..	..	..	..	..	..
Certificated Assts.	1.1	3.3	5.5	5.5	8.8	5.5	..	..	..	..
Uncertificated „	5.5	10.0	11.1	12.2	7.7	2.2	..	1.1	..	..

Number of Pupil Teachers taking Classes	1
„ „ „ assisting	13
Number of Probationers taking Classes	0
„ „ „ assisting	4

COUNTY DISTRICTS (RURAL).

TEACHERS. *Number of Pupils in Classes.*

District A. *Number of Schools*—93.

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Head Teachers ..	2.3	8.5	10.3	9.6	3.1	.77	1.1	..	..	..
Certificated Assts.	.4	2.3	4.2	3.07	.4	.8	.4	..	..	..
Uncertificated „	5.3	16.1	19.2	8.1	2.3	1.5	.4	..	..	..

Number of Pupil Teachers taking Classes	19
„ „ „ assisting	17
Number of Probationers taking Classes	2
„ „ „ assisting	1

District B. *Number of Schools*—95.

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Head Teachers ..	..	9.5	13.8	7.9	2.7	.8	.4	..	..	..
Certificated Assts.	..	1.1	2.2	1.5	2.3	.8	..	..	..	..
Uncertificated „	9.1	16.3	16.7	5.1	6.3	2.3	.8	..	.8	..

Number of Pupil Teachers taking Classes	22
„ „ „ assisting	22
Number of Probationers taking Classes	9
„ „ „ assisting	9

District C. *Number of Schools*—17.

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Head Teachers ..	..	4.7	6.3	8.0	1.6	4.7	1.6	..	..	..
Certificated Assts.	..	..	3.2	6.4	14.3	3.2	3.2	..	..	..
Uncertificated „	..	.8	19.0	9.5	4.7	..	1.6	..	..	..

Number of Pupil Teachers taking Classes	1
„ „ „ assisting	3
Number of Probationers taking Classes	2
„ „ „ assisting	2

District D. *Number of Schools*—46.

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Head Teachers ..	1.0	19.2	12.1	9.1	4.0	..	1.0	..	..	..
Certificated Assts.	1.0	2.0	2.0	2.0	1.0	..	1.0	..	..	..
Uncertificated „	7.0	27.2	5.0	6.0	3.0	..	..	..	..	..

Number of Pupil Teachers taking Classes	9
„ „ „ assisting	9
Number of Probationers taking Classes	14
„ „ „ assisting	13

District E. *Number of Schools*—90.

	20 and less.	30—20	40—30	50—40	60—50	70—60	80—70	90—80	100—90	100
Head Teachers ..	5.9	9.0	11.8	8.6	2.7	.9	.45	..	..	..
Certificated Assts.	.9	2.6	3.1	5.8	2.65	..	..	..	..	..
Uncertificated „	10.5	15.0	10.5	8.6	2.7	.45	..	..	..	..

Number of Pupil Teachers taking Classes	11
„ „ „ assisting	9
Number of Probationers taking Classes	4
„ „ „ assisting	5

DISTRICT F. *Number of Schools*—50.

Head Teachers ..	1.7	8.0	9.2	5.1	1.1	2.9	.5	..	..	..
Certificated Assts.	..	2.8	5.1	3.3	3.4	2.8	.5	..	..	..
Uncertificated „	3.4	13.8	19.0	9.7	4.0	.5	.5	..	..	..

Number of Pupil Teachers taking Classes	3
„ „ „ assisting	17
Number of Probationers taking Classes	0
„ „ „ assisting	4

DISTRICT G. *Number of Schools*—100.

Head Teachers ..	8	29	26	21	8	5	..	1	..	..
Certificated Assts.	..	4	10	11	14	1	..	..	..	..
Uncertificated „	10	46	42	37	12	6	1	1	..	..

No. of Pupil Teachers taking Classes	17
„ „ „ assisting	6
Number of Probationers taking Classes	27
„ „ „ assisting	39

NUMBER OF SCHOOLS RETURNED WHICH EMPLOY LESS THAN FOUR TEACHERS.

BOROUGHS.

			1 Teacher.	2 Teachers.	3 Teachers.
H.	5	Schools	0	0	0
I.	108	„	0	0	0
K.	26	„	0	1	5
L.	84	„	1	0	2
M.	76	„	0	1	12
N.	13	„	0	0	0
O.	67	„	1	2	3 (temporary)
P.	70	„	0	1	5
R.	9	„	0	0	0
S.	4	„	0	0	0
T.	54	„	0	4	2
U.	16	„	1	1	2
W.	2	„	0	0	0

COUNTY RURAL DISTRICTS.

A.	93	Schools	7	41	27
B.	95	„	15	42	23
C.	17	„	0	2	7
D.	46	„	10	19	13
E.	90	„	24	25	24
F.	50	„	4	10	16

COUNTY URBAN DISTRICTS.

A.	71	Schools	0	18	15
B.	17	„	0	2	3
C.	36	„	1	2	13
D.	14	„	0	1	3
E.	22	„	4	2	4
F.	22	„	1	3	4

GENERAL SECRETARY'S LETTER.

Colbury House,
Totton,
Hants.

Dear Friends,
March, 1906.

The arrangements for the Conference Meetings (other than the Council Meeting) are in the hands of the Cheltenham Committee and Secretaries, who are preparing a most attractive Programme.

May I draw your attention for the last time to the deficit in connection with our Magazine? So far only £5 have been contributed, chiefly by friends who have already liberally supported *The Paidologist* by donations in the initial stages. We expect a deficit of some £45, which must be paid off before May. Our Society is not composed for the most part of wealthy people, but I cannot but think we have a few Members with independent means who could make a liberal donation to help us at this juncture. A similar debt can hardly be incurred again, owing to the new arrangements made at our last Council Meeting; therefore I believe that this is the last appeal of this kind.

We have received five volumes of printed copies of the Papers read at the Liège Conference, which could be lent to Members.

I should be grateful for the names and addresses of people in Bradford, Glasgow, Dover, and Folkestone, who would be likely to take an active interest in Child-Study.

Will Branch Secretaries be so kind as to send me a copy of their local Rules for the guidance of new Branches?

Yours sincerely,
MARY LOUCH (*Hon. Gen. Sec.*).

The Ninth Annual Conference.

The Annual Conference of the Association will be held at Cheltenham on May 10th, 11th, and 12th.

The Committee of the Cheltenham Branch is desirous to know from the Branch Secretaries how many Members are likely to attend the Conference, and to extend to all a cordial invitation. The Programme, as at present arranged, is as follows:—

THURSDAY, MAY 10TH.

7.30 p.m. — Reception in the Princess Hall, Ladies' College, by MISS BEALE, the President, the Council of the Ladies' College, and the Local Branch.

8.15 p.m. — Presidential Address by MISS BEALE. Lecture by J. W. SLAUGHTER, Esq., Ph.D., London University Extension Lecturer on the Psychology of Infancy and Childhood. Subject: "The Meaning of Interest." Chairman: MISS BEALE.

FRIDAY, MAY 11TH.

10 a.m.—Council Meeting at the Ladies' College. Chairman: MISS BEALE.

3 p.m.—General Business Meeting at the Ladies' College. Chairman: MISS BEALE.

4.15 p.m. to 6 p.m. — Reception at St. Mary's Hall Training College by MISS REYNOLDS and Staff.

7.30 p.m.—Reception at the Town Hall by the Mayor of Cheltenham. Lecture by WALTER JORDAN, Esq., M.D., of Birmingham. Subject: "The Medical Inspection of School Children." Chairman: The Mayor.

SATURDAY, MAY 12TH.

10 a.m.—Meeting at the Ladies' College. (All interested in Elementary Education are invited.) Lecture by MISS BYETT, of Birmingham; to be followed by Discussion on "Reform of Infants' Schools." Chairman: HON. SIR JOHN COCKBURN, M.D., K.C.M.G., late Minister of Education for South Australia.

(Signed) G. G. PRUEN, Esq., *Local President.*
MARY A. CHEVALLIER, } *Hon. Secretaries.*
MABEL M. ELLIOTT, }
T. M. A. COOPER, Esq., *Hon. Press Secretary.*

The Library.

Psychologie de l'Enfant et Pédagogie Expérimentale, par Le DR. ED. CLAPAREDE, Directeur du Laboratoire du Psychologie de l'Université de Genève. Genève: H. Kündig, Editeur.

The author of this interesting brochure is already known by his researches in biological and psychical subjects. He is a firm believer in the dependence of pedagogy upon psychology, and in that belief has founded among the teachers of Geneva a Circle for Child-Study. He recognises that the problems of psycho-pedagogy fall into two groups, those of the first group being interpreted by purely theoretical psychology, while those of the second group are practical in nature, and may deal with (*a*) the recognition of given mental states (psycho-gnostique, corresponding to the diagnosis of medicine), and (*b*) with the obtaining of a desired result (psychotechnique,) which corresponds to therapeutic treatment in the art of healing. He gives as an example the study of memory. Theoretical psychology enquires what are the laws of memory, its factors, and how it is evolved. The Psycho-gnostique demand is—" How can we measure the faculty of acquisition or the power of conservation in a given case ? " while the problem of the Psychotechnique enquirer is : " What is the best method of memorising a text in a given time ?

The treatise gives specimens of these three modes of enquiry as applied to two subjects—Fatigue and Memory. Some very interesting tests, with their results, are recorded. Some of these results, collected not only by the writer, but taken also from the work of such observers as Binet and Ebbinghaus, would, we imagine, be startling to many teachers. Thus he remarks that while traditional pedagogy considers gymnastic movements as an opportunity for relaxation from mental work, which may be resumed after a break employed in this manner, it appears, upon careful observation, that muscular work has the effect of reducing the nervous energy for the time, and that the supposed gain is not secured. The inference is that there should be two kinds of physical exercises, one of which is part of the educative and disciplinary programme, giving training in attention, promptness of movement, courage and will, and should come early in a school session ; and the other purely recreative, coming when lessons are over. He also combats the theory that change of work is sufficient rest, and quotes interesting tests carried out by Prof. Sculze, at Leipzig, in this connection. Dr. Claparède points out that fatigue is a *general* phenomenon : it arises from an accumulation in the blood of toxic matters, resulting from nervous and muscular work. Now this blood irrigates equally those parts of the brain which work and those which do not, and is therefore injurious not only to those centres where disintegration has been the origin of the fatigue, but also to those cerebral regions that have not been functioning at all. The change of work—though, by reason of the spur given to the interest, it may secure good results for a short time,—continues to augment the capital of fatigue already set up in the organism. " Le seul moyen vèritablement efficace de se reposer, cést-de ne rien faire."

The studies in Memory are equally interesting. The hints on helping memory by linking contingent facts, the knowledge of which satisfies no natural instinct of the child, to some fact that has such an inherent power, are of considerable practical interest to teachers who are obliged to do a great amount of mechanical work. The reminiscences of the author's school days form a powerful plea for correlation as a help to memory. He recalls in a striking image that a dozen different columns were reared in the open space of his mind, having no connection of floor or arch or vaulting to form a temple of knowledge. " Il me paraissait même," he says. " Que chacune de ces colonnes appartenait à un univers, different, and que le moyen âge de l'histoire était un tout autre moyen âge que celui de la littérature."

The experiments in memorisation here recorded give comparisons between the fragmentary and the " global " method of memorizing, and the results are greatly in favour of the latter. The author believes that the generalisations obtained from these investigations ought not only to be converted into precepts for the teacher, but also put into the possession of the pupil. We ought to help our scholars to help themselves. " Avaut d'apprendre, il faut apprendre à apprendre." Lessons in memorisation will appear in the school programme of the future. English teachers will gain much from looking carefully through this little book, for which the short space available for a notice of this kind is inadequate. M. M. P.

The Pedagogical Seminary. Vo. XII. Nos. 3 and 4.

The following is a list of the chief articles in the September and December numbers :—

No. 3.—" The High School Teacher, from the Pupil's Point of View " (based on Essays written by 1,067 Senior High School Pupils), by W. F. Bork. " The Predominance of Female Teachers "—A. A. Cleveland. " The Pedagogy of History "—Dr. G. S. Hall. " The Negro in Africa and America "—Dr. G. S. Hall.

No. 4.—" What is Pedagogy ? "—Dr. G. S. Hall. " Societies and Academies in Early Times "—Dr. Ed. Conradi. " Studies of a Child," No. III.—Prof. and Mrs. Alex. Chamberlain. " Certain Degenerative Tendencies among Teachers "—Dr. G. S. Hall. " A Central Pedagogical Library "—Dr. G. S. Hall. " Citizens' Initiative as a Factor in Educational Progress"—Dr. G. S. Hall. "The Efficiency of the Religious Work of Young Men's Christian Associations"—Dr. G. S. Hall. "The Education of Ministers"—Dr. G. S. Hall. "How Children learn to Read: An Experimental Study"—Dr. Lucinda P. Boggs.

In a brief review it is impossible to adequately summarise, much less to distinguish between and comment on the quantity of new material, and the many new points of view constructed for old material, in these two journals. We can only urge readers of *The Paidologist* to get them and read them. A glance at the titles shows that the *Pedagogical Seminary* by no means confines its attention to subjects that are ordinarily understood as the province of "Child-Study." The article on "The Negro in Africa and America," for instance, is as full of interest for statesmen and the organisers of Foreign Christian Missions as for Educators.

These numbers are particularly rich in material from the pen of Dr. G. S. Hall, and in view of the fact that he is expected to lecture next winter in England, we shall do well to get acquainted with him first, from such sources as these, for, excepting the two large volumes on *Adolescence*, Dr. Hall has published few books. His remarkable grasp of the tendencies of modern life, social, political, and religious, as well as educational, is seen in the variety of topics he discusses, unravels, and illuminates in these two journals. It is of great moment for the wide influence the new psychology is destined speedily to exert that its chief leader is not only a great scientific investigator, but also a keen and far-sighted organiser of the new forces evolved, that, for instance, on the one hand, his interest leads him to personal, close examination of Young Men's Christian Associations, followed by the giving of sympathetic and wise counsel; and, on the other hand, to appeal to the authorities of the Unitarian Churches for a more liberal and thorough training of their Ministers. To the latter he says: "We are not the last or the best on earth, and it is cosmic provincialism to train only for service to and in the world as it now is, as if each generation were a fac-simile of that which preceded. The élite few pioneers and prophets of this neo-Christianity already proclaim a service that is a fiery passion, that would consume self as fuel—yes, that would be dung to fertilize the new life, just as the soma is subordinated to the immortal germ plasm."

"Certain Degenerative Tendencies amongst Teachers" should be read in connection with the papers on High School

Teachers and on Pedagogy. Dr. Hall says: "Verbalism, technique, rules, definitions, notes, preciseness, accurarcy,—these have their place, but very little of them for children." Mr. Cleveland says: "In regard to mechanism and routine in the schoolroom, the opinion is almost unanimous that women are more prone than men to become mechanical, and to do things in a routine way."

The Paper founded on Essays from High School pupils should be accepted, we think, with some reserve. Many of the grounds of likes and dislikes given are what one would have anticipated; but despite the precautions taken to secure frank statements, we doubt whether girls and boys at this age would really be frank. In a somewhat similar investigation tried a few years ago on a small scale in England, two students confessed later that they did not like to be questioned about their favourite teachers, and therefore wrote a description of the lady commonly held to be a model—the Principal of the School.

The "Studies of a Child" is a third Paper of observations by Prof. and Mrs. A. Chamberlain, of Clark University, of their little girl, now more than four years old. It is, doubtless, one of the most detailed individual studies that has been made, and it suggests a case of remarkably rapid development. The observations of the growth of speech are particularly interesting.

"How Children Learn to Read" is the description of a brief experiment on four children, about the age of five years, with a view to discover which ability is acquired the most quickly—that of recognising letters, syllables, single words, or sentences. "In all cases the sentences were recognised more often the first time than any other unit. The word was recognised more often than the syllable or letter. . . . . In two observers the syllable must be shown more often than the letter, and in the two others the letter must be shown oftener."

M. E. F.

Tekel—A Study of Educational Problems of the Day. FRANK J. ADKINS, M.A. Swan, Sonnenschein and Co. 193 pages, and 4s.

This book, made up of reprints of Essays contributed to the *Westminster Review*, *Saturday Review*, and *Journal of Education*, is somewhat less ambitious than its sub-title would indicate, for too many "problems of the day" are touched upon to allow of any being adequately "studied." The "Tekel" written by the hand of the last war in which we were engaged, forms, however, with its note of warning, the inspiration of the whole. The weakness of the book consists in its attempted survey of so wide a field. There has been so much uprooting, planting, and transplanting of late years, that a mere " coup d'œil " gives only a blurred picture of the result. And dealing as the book does with many of the changing aspects of a time of reconstruction, rather than with fundamental problems, it is not surprising that some of the allusions and suggestions already tend to become ancient. And, again, there are so many of us engaged in various parts of the educational field, our methods and ideals are so various and so often confused, that it is difficult to be always consistent in passing judgment on us and our works. But the tone throughout is sympathetic and enlightened.

Primary education has been in the past too much "run on business principles," and there is danger lest the business men who sit on education committees, unable to appreciate the more subtle and permanent results of a well-devised school course, in their desire for something they can weigh and measure, may arrest the growing tendency to break away from the results system. To counteract this evil, the writer suggests reliance on the educational expert; but even more does he insist on the need of trust in the skill and integrity of the teacher. And, surely, without this no further advance can be made. Thence follows an inquiry into present methods of training teachers, especially those of the primary school.

A chapter on the " Moral Side " of school work expresses a reasonable view of corporal punishment, which is held to bring with it, in most cases, " no sense of degradation." and some acute remarks on school discipline, the true test of which " is not the perfection of order, but the readiness of obedience." There still remain some glorified drill sergeants, the products of old methods, who might read these few pages with advantage.

It is in the last two chapters on " Some Social Possibilities " and " Intensive Education " that the number of topics touched upon leads most evidently to scrappiness of treatment. They contain many valuable suggestions, the result of thought and wide reading, but these do not always appear to be co-ordinated. If it is true that " our modern methods consist in giving the tree-trunk an ivy-like incrustation of facts—which is, in reality, choking the life out of it " (page 152),—is it also true to say that in our elementary schools " teachers are so anxious to ' develop intelligence ' that they nurse the feeble plant till it is too thin and weak to stand by itself ?" (page 156). And should "woodwork centres be large enough to take whole classes at a time," or should classes be small enough to be taken entire into a normal woodwork centre, accommodating forty pupils ?

To teachers, perhaps, the most valuable part of the book is to be found in the appendices, giving some capital suggestions on methods both of teaching and of organisation. But the book is well worth consideration by all concerned with education, especially, directly or indirectly, with its administration, and should be read whilst the problems with which it deals are still awaiting solution. T. G. T.

Archives de Psychologie. Published at Geneva, October, 1905. 112 pages. Price, 4 francs. London: Williams and Norgate.

There is much in this issue of interest to the psychologist, but little that directly concerns the students of education. Those of the latter who are interested in the development of defective children will find at the end of the number two reports worth consideration—the one of the Fifth Swiss Conference. for the "Education and Protection of Abnormal Children," held at St. Gall, in June, 1905; the other of the third Belgian Conference for the "Improvement of the Lot of Abnormal Children," held in Brussels, in May, 1905. Both deal with the need of further differentiation between the classes included under the general term abnormal, and also with the necessity of further organisation and provision on the part of the State. Emphasis is particularly laid on the latter in the Belgian Report, methods of treatment, especially the question of the "grouping of scholars in conformity with their mental capacity," having found fuller consideration in the Swiss Conference.

Closely related to the same line of interest is the first article, by M. Lemaitre, giving an account of the cure of a cerebral disorder in a lad of fifteen years. Subject to nightmares and hallucinations, he was prey to a double personality: under the influence of the first, modest and tractable; when under the other, proud and self-assertive. This condition had continued for three years, with an increasing display of the less desirable characteristics of the second phase; the cure attempted was that of raising a third and latent personality, by means of hypnotic suggestion, into which the others should fuse. This was successfully carried out, and, at the time of writing, the cure seemed complete. The description of the case and the process of treatment occupies some twenty pages.

This article is followed by a short one dealing with "Some Objective Signs of Suggestion during Hypnotic Sleep"; and this by a description of "A new apparatus for the testing of acoustic perception." There follows a contribution to the never-ending discussion on "Psycho-Physiological Parallelism." M. Claparède then offers a possible solution of another oft-discussed and older question —the cause of "The apparent enlargement and proximity of the moon at the horizon." He enters into the matter with his accustomed thoroughness, and concludes that the important and often overlooked factor in the case lies in the tendency to regard the stars, and especially the moon, when at the horizon, as terrestrial objects; from their position they appear to belong to the earth, and are not at first clearly identified, by reason of their changes of colour, and things that belong to the earth "interest us more than those which appertain to the inaccessible regions of the sky." Having reached this conclusion, he is delighted to find that another investigator had published a similar opinion in 1904.

At the end of the articles there is an interesting note on the question, "Why do we so often, after having mistaken some unknown person for an acquaintance, meet this acquaintance shortly after? The conclusion is that the matter can usually be simply explained by the circumstances of the particular case, and there is no necessity to invoke the aid of telepathy. T. G. T.

The Educational Ideas of Froebel. By JESSIE WHITE, D.Sc. Clive and Co.

This little book gives (*a*) a clear account of Froebel's life and educational experiences, shewing the effect which these produced upon the educational theories which he developed, (*b*) chapters dealing with his most important books—*The Education of Man*, *Pedagogics of the Kindergarten*, and the *Mutter und Kose Lieder*. The writer is notably free from the tendency to rapturous effusiveness which so often makes Froebelian literature a weariness to the sober-minded, but at the same time she does full justice to her hero's originality, zeal, and to the obligations he has laid upon modern pedagogy. Her use of quotations is specially wise and tactful, and scoffers who ignorantly suppose Froebel to have been an obscurantist and sentimentalist will be enlightened by the dicta from his writings which Mrs. White has selected to explain and justify his methods and schemes for curricula. She notes that Froebel has suffered from mechanical imitators, and, further, points out that physiological advance has necessitated some modifications in his practical methods. But she contends that his principles are supported by modern psychology, and are thereby coming to be better understood. This little book is a temperate and clearly-presented survey of a great educator's life-work, and will be of great service both to beginners and to Froebelian teachers whose ideas need clarifying and crystallizing. M. M. P.

The Educational Ideas of Pestalozzi. By J. A. GREEN, B.A. Lond., Professor of Education at the University College of North Wales, Bangor. (Clive and Co.)

This is a very exhaustive little work, soberly written, without either the effusive hero-worship or the half-contemptuous patronage which Pestalozzi has often encountered in his exponents. The work is one of a series written for the benefit of students reading for the "Certificate" Examination, and such students will find the material for a first study of this great educator ample in quantity and clearly arranged. There is a chapter entitled "Historical Introduction," very necessary in the presentation of the life of a foreign educator born a century-and-a-half ago. But, believing, as we do, that the primary teacher can gain more hope and encouragement from a contemplation of Pestalozzi's experiment at Stanz than from any other episode in the whole history of Education, we could have wished that the story of these five months—the seed plot of the elementary school systems of the future—could have been treated more fully in the body of the work, instead of being relegated to an appendix.

The exposition of Pestalozzi's principles is clear and thorough, though a little more illustration from actual school practice would have been helpful, and a fuller account of the actual contents of "How Gertrude Teaches" might have been more of a stimulus to teachers who are not yet Pestalozzian students, to become acquainted with that remarkable educational classic. There is an interesting chapter on the influence of Pestalozzi on other Educators and Reformers and, indeed, the historical perspective is one of the best features of the book. There is, as far as we know, no other work in English so admirably adapted for the purpose of serving as an introduction to the study of the life and work of one to whom teachers of all grades, and especially of the primary grades, owe the tribute of a grateful memory and of an honest attempt to understand him.

The Educational Ideas of Pestalozzi and Froebel. By F. H. HAYWARD, D. Lit., M.A. (Ralph, Holland and Co.)

This little book has reached a second edition. The work has excited considerable comment: it has a freshness, an allusiveness, and also an audacity which is not usually found in textbooks for teachers preparing for the "Certificate" Examination. It begins with a vigorous protest against "the pernicious and extraordinary influence of that thief, rogue, and voluptary of Geneva"—Rousseau. "At every educational council-board stands the shadowy figure of Rousseau, its presence boding ill for the future of education." The author is specially grieved at the influence exercised by Rousseau over the two men he is concerned with,—Pestalozzi and Froebel. In examining their work and writings, he is careful to indicate where this influence operates, as he thinks, detrimentally to the development of their own genius and to the working out of their intuitions. We are glad to see that Dr. Hayward renders full justice to Pestalozzi, who has been too often treated by educational writers with something like an impertinent indulgence. His essential originality and his sanity are alike fully recognised, but we could wish that the scope of the book had allowed Dr. Hayward to tell more fully the story of his life, and especially of his experiences at Stanz, the presentation of which is likely to be more of a perpetual inspiration to primary teachers than the ablest exposition and criticism of his theories.

The book, though suggestive and stimulating on every page, is somewhat wanting in proportion. Besides the diatribes against Rousseau, a long chapter, entitled "Nature Light and Nature Moonshine," and also an appendix of several pages, are devoted to an attack on what is known in England as the Wordsworthian view of the influence of Nature. No doubt, much sentimental fog has hung over this subject, which, by-the-by, has been most ably treated by Dr. MacCunn in his "Making of Character," but many will think that the mysticism of Froebel may yet join hands with the scientific method and results of Darwin in giving guidance to pedagogy. Of more immediate value to the students for whom the work is intended are the clear expositions of what is meant by studying "Nature" *in* the child, of Anschaung, and its applications in school life and school subjects, and of the relation of the Froebelian "self-activity" to the Herbartian conception of education as the building up of idea masses in the mind. The author considers these and other topics in the light afforded by the practice and writings of Froebel and

Pestalozzi, but it should be pointed out that a knowledge of these is assumed rather than supplied by these vivacious pages. A duller treatise might well give a clearer and more connected view of these two reformers and their contributions to education, but a thoughtful teacher could ill afford to dispense with the interesting aperçus which the work before us so admirably supplies. M. M. P.

The Little Book of Health and Courtesy. P. A. BARNETT. Longmans, Green and Co. 3d. 24 pages.

This is a series of concise and simply worded rules of conduct in matters appertaining to personal cleanliness and to manners, written for boys and girls. The title "Courtesy" indicates the range of conduct included, for the counsels cover not only behaviour at table, in the streets, the use of books, etc., but also the general attitude to be observed towards others, as slowness to take offence, cheerfulness of demeanour, etc. It is a very sensible and wholesome little book, and will be valuable for boys and girls who have arrived at the understanding age. A copy should be put into the hands of each of the boys and girls in the upper classes of primary and secondary schools. S. Y.

Longmans' British Empire Readers. First and Second Primers and First and Second Infant Readers.

A Set of Readers for the Infant School Classes, with coloured and other illustrations, and clear type. In every way these books are likely to facilitate the difficult process of learning to read to the young reader. S. Y.

Elementary Lessons in English. By ARTHUR T. BOTT. Longmans, Green and Co. 192 pages.

A clearly-expressed and printed series of explanations and exercises in English Grammar and Composition. The latter includes such matters as use of quotation marks and other punctuation signs, the correct use of words, ambiguity, etc. The lessons in Grammar are shorn of all needless technicalities and complexities. S. Y.

BOOKS RECEIVED.

Psychologie de l'Enfant et Pedagogie Experimentale. DR. EDWIN CLAPAREDE. Kündig, Geneva.

Tekel. A Study of Educational Problems of the Day. F. J. ATKINS. Swan Sonnenschein and Co.

The Little Book of Health and Courtesy. P. A. BARNETT. Longmans, Green and Co.

First and Second Primers and *First and Second Infant Readers.* Longmans, Green and Co.

Elementary Lessons in English. ARTHUR T. BOTT. Longmans, Green and Co.

MAGAZINES RECEIVED.

Pedagogical Seminary, Worcester, Mass.
Archives de Psychologie, Geneva.
Parents' Review. Kegan, Paul and Co., London.
Child Life. George Philip and Son, London.
School Review, Chicago.
Teachers' Institute Magazine. Kellog and Co., New York.
Indian Journal of Education.
Japanese Magazine of Child-Study.

Branch Reports.

BIRMINGHAM.

President—PROF. J. H. MUIRHEAD, M.A., LL.D.
Hon. Secretary—MISS A. J. DAWES, LL.A., 75, Gladstone Road, Sparkbrook.

During the session the work of this Branch has been progressing very favourably. The Lectures have been particularly successful, and have been well attended. Interesting discussions have invariably followed the papers.

The following is a list of Lectures given since the last issue of *The Paidologist* :—

1905.
November.—"Attendance of Infants under Five." MISS PALMER.
December.—"The Acquisition of Language and Expression." DR. ALEXANDER HILL, Master of Downing, Cambridge.
1906.
January.—"Apparatus and Equipment of Infants' Schools." MISS BYETT, LL.A.
February.—"The Medical Inspection of Schools." WALTER R. JORDAN, M.D.

On March 20th, a Paper on "Co-operation between Primary and Secondary Schools" will be given by MR. ALFRED FLAVELL.

A. J. DAWES, *Hon. Sec.*

CHELTENHAM.

President—G. G. **Pruen**, Esq., M.A.
Hon. Secretaries—Miss M. A. **Chevallier** and Miss M. M. **Elliott**,
Ladies' College.

Two Meetings have been held since the last Report was published. On December 12th, Miss Innes gave a Lecture on "Children in Literature." This Paper is printed (partly) in this number of *The Paidologist*, and it is only necessary here to record the pleasure which it gave to all who were present at the Meeting.

On February 14th, Miss K. Phillips lectured on "Infants' Schools." The Lecturer gave a wise and kind criticism of the older methods employed in the education of very young children. She considered that these were too mechanical, involved too much sitting still on the part of the children, made demands on the children for no form of mental activity other than that involved in irritation, and gave no encouragement to the child to observe things for himself. The orthodox object lesson of the Infants' School was especially useless. Thus, we were told of a class of babies in London for whom an object lesson on "An Eagle" had been prepared, and of another which was expected to find an absorbing interest in "Albatrosses and Penguins." Miss Phillips made a special plea that Infants' Schools should be administered on Froebel's own lines. It is possible here to give only one or two stray points from a Lecture which was full of material. The Branch owes Miss Phillips a special debt of gratitude, as she came to Cheltenham while still suffering from the effects of recent illness.

The Meetings were well attended, and concluded with interesting discussions. At the second Meeting, Members of the Education Committee of the town spoke very sympathetically of the suggestions made by Miss Phillips.

T. M. A. **Cooper**, *Hon. Press Sec.*

DERBY.

President—Miss A. C. **Tuke**, The High School for Girls.

Beyond the facts that the membership has not decreased, and that a Secretary has not yet been found, there is nothing to report.

EDINBURGH.

President—Prof. **Alexander Darroch**.
Vice-Presidents—Dr. **Clouston** and A. E. **Scougal**, Esq.
Hon. Secretary—Mrs. **Andrew**, 27, Alva Street.

The following Course of Lectures, arranged for the Session 1905-6, is in course of being delivered :—

Opening Lecture, by Prof. **Earl Barnes**: "A Quantitative Study—'Children's Attitude towards Law,'" in the Hall of

George Watson's Ladies' College, 5, George Square, on Tuesday, 21st November, at 7.30 p.m. A. E. SCOUGAL, Esq., H.M. Senior Chief Inspector of Schools in Scotland, will preside.

Wednesday, December 13th, 1905.—"Baby Linguistics," by DR. W. B. DRUMMOND, M.B., C.M.

Wednesday, January 31st, 1906.—"What Proportion between Hand and Head Work should be observed in the Curriculum of Children under Seven ?" "What are the most Educative Forms of Hand Work ?" By MISS ANDERTON.

Wednesday, February 28th, 1906.—"Children's Literature," by MRS. JACK.

Wednesday, March 14th, 1906.—"What is the Place of the Free Kindergarten in relation to the Primary Schools ?" by W. SCOTT STEVENSON, Esq., Edinburgh and East of Scotland College of Agriculture.

Lectures are for Members, but all interested friends are invited. The Annual Fee of 3/- includes the three numbers of *The Paidologist.*

Our Opening Lecture, given by Professor Earl Barnes, on "Children's Attitude towards Law," on November 21st, was of especial interest, and secured a larger audience than the Branch has ever had before. It led to a great increase of Members, and the Meetings since have profited by the impetus given.

On December 13th, Dr. W. B. Drummond lectured on "Baby Linguistics" to an audience delighted with his original treatment of the subject.

On January 31st, 1906, Miss Amy Anderton opened a Discussion on "What Proportion between Hand and Head Work should be observed in the Curriculum of Children under Seven ?" This topic was chosen on account of the enquiry which the Branch is making concerning the curricula in Infant Schools in the district, and it proved to be an attractive one both for teachers and parents.

MRS. ANDREW, *Hon. Sec.*

LIVERPOOL.

President—PROFESSOR SHERRINGTON.

Hon. Secretary—JOHN HAY, M.D., 12, Rodney Street.

The Liverpool Branch has at the present time a Membership of 114.

The Meetings held since Christmas have been well attended, especially that on the 27th January, when Mrs. Humphrey Ward read a Paper on "Holiday Schools." She detailed the successful experiments essayed in these schools in London, and advocated their extension to other congested areas.

In the words of George Eliot, evening recreation schools were "incalculably diffusive." There was in London a growing demand that these schools should be open to each child to whom they were suitable every evening, and she hoped some provision would be made for their encouragement in the new and all-embracing Education Act promised by Mr. Birrell.

On February 9th, Doctor Arthur Somervell, H.M.I., of London, delivered a Lecture entitled "The Value of Music in Education."

He treated of Music in its broadest sense, as understood by the Greeks. He held that education up to the age of thirteen should be mainly that of the senses. There was a trinity in matters educational which was sadly neglected, the trinity of conscience, the "Scientific," or the love and worship of the true, the "Nonconformist," or the love and worship of the good and moral, the "Artistic," or the love and worship of the beautiful. True education and development could be present only where these three existed in their correct proportions. Up to now the artistic conscience has been sadly neglected.

The Lecture was intensely interesting, very revolutionary, and delightfully impracticable.

On February 23rd, R. C. Dun, Esq., F.R.C.S., described "Some of the More Common Diseases of Childhood," and discussed "their recognition and prevention."

On March 2nd, H. V. Weisse, Esq., M.A., expressed his views on "School Morals." The tone of the Paper was rather pessimistic. Mr. Weisse did not consider that children were any better now than they were twenty years ago. He believed that "Light" and Love will be sufficient to overcome all difficulties—"Light" to reveal the wonders of the world, and Love to give the guiding hand.

JOHN HAY, *Hon. Sec.*

LONDON.

President—SIR JOHN A. COCKBURN, K.C.M.G., M.D.

Hon. Secretary—MISS K. STEVENS, Carlisle House, Dartmouth Park Hill, N.W.

The very fine Series of Lectures which had been arranged for the Michaelmas Term, in conjunction with the Childhood Society, was successfully carried through. The Papers read, the discussions that followed, and the attendances, were invariably good, the whole forming one of the most successful Courses this Branch has held.

The following Lectures have been arranged for the Lent Term:—
1906. (Thursdays, at 8 p.m.)

*February 8th.—"American Schools and their Relation to the Child and to Society," by J. C. HUDSON. Chairman: WM. GARNETT, M.A., D.C.L.

†February 15th.—"Conditions of Children, Physical and Mental, in Resident Schools," by ROBERT MILNE, M.D., C.M. (Medical Officer, Dr. Barnardo's Homes and Hospitals. Chairman: The RIGHT HON. THE EARL STAMFORD.

†March 1st.—"Child Life in Japan," by MISS MIYAKAWA. Chairman: SIR LAUDER BRUNTON, LL.D., M.D., F.R.C.P., D.Sc., F.R.S.

*March 15th.—" Imagination in Childhood," by J. W. SLAUGHTER, Ph.D. Chairman: SIR EDWARD BRABROOK, C.B.

*March 22nd.—" Proportion in Education," by J. C. MEDD, M.A. Chairman: SIR JOHN A. COCKBURN, K.C.M.G., M.D.

†March 29th.—" Psychology of Reading," by E. WHITE WALLIS, F.S.S. Chairman: J. W. SLAUGHTER, Ph.D.

* Arranged by the British Child-Study Association.
† Arranged by the Childhood Society.

This Course of Lectures was opened on Thursday, February 8th, when Mr. J. C. Hudson gave a Paper on " American Schools and their Relation to the Child and to Society."

The Lecturer admitted that he went to America prepared to see the best, and during his three months' visit kept the " note of admiration high." To the American, education is of the utmost importance: he holds it to be the first line of national defence and social advance; schools are social rather than political in their government; education is for everybody,—indeed, social and educational difficulties sometimes arise from multiplication of opportunity.

The schools are in a state of transition, hence we get conflicting and contradictory accounts,—but more and more is the pupil getting points of contact between his " studies " and his daily life. The efforts to graft on new ideals are sometimes disappointing, particularly in New England, where the barrack school and a certain inelasticity of organisation prevail.

Generally, chief attention is given to the more recognised school subjects, while Nature-Study, Music, Handwork, etc., are but incidents; in the more advanced schools, instruction is becoming less formal and " doing," though always connected with some thought, is considered a vital part of education. The Lecturer mentioned two instances of the stimulus given to study by a little bit of real work: in one case, two boys, with the help of their teacher, invented a golf ball, which was a financial success; in the other, a boy, at the suggestion of his teacher, not only collected valuable information concerning a certain fungus, but managed to rid his father's garden of the pest.

An interesting discussion followed the Lecture. Mr. Hudson was called upon to answer several questions concerning co-education, large schools, manual training, prize-giving, etc. The Meeting concluded with a vote of thanks to Mr. Hudson, and to Dr. Garnett for acting as Chairman.

The London Branch has been fortunate in securing Dr. Slaughter as a Member of its Committee, and Mr. J. C. Medd as a Vice-President

CIRCLE FOR STUDY OF DEFECTIVE CHILDREN.

Meetings held at 8 p.m., at The Institute, 36A, Longridge Road, Earl's Court (by kind permission of Miss Bertha James).

9th October, 1905.—Address on "The Mentally-Defective, considered from the Biological Standpoint," by G. P. Mudge, Esq., A.R.C.Sc. (Lond.), F.Z.S. (Lecturer on Biology at the London Hospital Medical College, and at the School of Medicine for Women).

6th November, 1905.—"Mental and Physical Unfitness, from the Biological Aspect; Some Features of Heredity."—G. P. Mudge, Esq.

5th December, 1905.—"Teachers of the Feeble-Minded."—Miss Bertha James.

8th February, 1906.—"Environment and Heredity in their relation to Mental and Physical Unfitness," following Mr. Mudge's Addresses on "The Mentally Deficient, from the Biological Standpoint."—Miss Douie, M.B.

6th March, 1906.—"A Colony for the Feeble-Minded."—Miss Bertha James.

3rd April, 1906.—"The Importance of Speech-Training for the Feeble-Minded."—M. Friedeberger, Esq., Ph.D.

12th June, 1906.—"The Power of Environment."—A. J. Warren, Esq.

ETHEL L. DIXON.

IMPORTANT.—During Miss K. Stevens' absence in America, from April to September, her secretarial work will be undertaken by Miss C. A. Hart, 56, Burgoyne Road, Harringay, N.; Mr. J. E. Hudson, The Cedars, Highgate Avenue, N., will attend to all financial matters.

T. G. T.

MANCHESTER.

President—SIR WILLIAM MATHER.

Hon. Sercetary—MISS F. W. HARRISON, High School for Girls, Dover Street.

Since the last Report, the Members have been busy getting signatures to the petition *re* Infants under Five Years of Age, of which a copy was issued in the last number of *The Paidologist.* They were successful in obtaining signatures of very many well-known citizens—notably, influential medical men, and also some of the leading educationalists.

On Tuesday, November 7th, 1905, Mrs. Kirk, of Bradford, who has succeeded in solving the question of the "Babies'" Class in the Infant Schools, gave an admirable Paper (which is reported elsewhere in this number) to a large and enthusiastic audience at the Manchester High School.

On Monday, December 4th, 1905, Miss E. P. Hughes, late of the Cambridge Training, gave a Paper on "Education in Japan." According to this Paper, we Britishers have much to learn from the Japanese in many respects.

Owing to Mr. W. E. Urwick having been appointed as H.M. Inspector, he was unable to read his promised Paper on "The Training of Pupil Teachers," and Miss E. Herford and Mr. S. W. Meek kindly anticipated their Papers on "Organised Games in Secondary Schools," and read them to an appreciative audience of nearly two hundred Members of the joint Societies of the Teachers' Guild, Froebel Association, and B.C.S.A., at Owens' College, on February 12th.

Mr. J. L. Paton, High Master of the Manchester Grammar School, took the chair, and said the question was not one merely of physical development. It concerned not only the health but the character of schoolboys and schoolgirls. Football, for instance, taught a boy that he could not win a match by himself. He must co-operate with and sacrifice his individual desires for the good of the team. This was a most important lesson for the boy to learn, because no great results were attained in life without the hearty, self-effacing, loyal co-operation of many to a common end.

The discussion was opened by Miss Herford, who moved a resolution declaring that no school education for boys or girls could be considered satisfactory that did not include adequate arrangements for all to take part in corporate games. If the day school, she said, was ever to become the ideal school—the school which should co-operate with the home in the bringing up of our future citizens—this problem of corporate games must not be overlooked. Personally, she would not be satisfied until organised games were looked upon as an important item in every school time-table. There still existed a certain prejudice against girls' games, but it was extraordinary how, like other prejudices, this was dying out with a little first-hand knowledge. Miss Herford described the systems at work in some of the large public schools, under which team games were made a part of the school training. She enumerated the physical, mental, and moral advantages which girls obtain from such games. One advantage of their introduction was that shorter time must be given to work, and there must therefore be more concentration. The amount of time that women and girls gave to work—or, rather, sat over their work—was monstrous. Better work might be done by less prolonged and more concentrated effort. Among the moral advantages which a girl might gain was the learning to get a victory quietly and to take a beating well.

Mr. S. W. Meek seconded the resolution in a carefully-thought-out Paper, and discussed the question of Organised Games in Boys' Secondary Day Schools. He prefaced his remarks by saying that although he only felt himself competent to speak concerning boys, yet he saw no reason why the same organisation should not be applied to girls.

Assuming that organised games are essential to the healthy tone of an English Secondary School, he proceeded to sketch one possible plan for such games, on the lines and in the spirit of the best Public Schools. Of the Public Schools, there are three dangers to be avoided, one where Athleticism is paramount in interest, to the exclusion of intellectual alertness and originality; another, in which the "Monastic System" prevails; and a third where the Boarding arrangements are in the hands of House-Masters, who practically make a profit on them. Speaking broadly, there is no danger in the great *day* schools from any or all of these three pitfalls: the danger lies in quite the opposite direction.

As to the games themselves, they are the same in all schools—Cricket, Football, Lacrosse, Hockey, and, if practicable, Rowing.

They should be compulsory for all, and the willing co-operation of the parents is most important in a day school. The ground should be on a scale of two acres for every hundred in the school, with pavilion, and a good groundsman, who knows how to handle boys.

With regard to the actual organisation of the games, two main ideas must be kept in view—that the boys will resolve themselves into two sets, the picked few and the general mass, and both of these must be catered for. Far below the surface a strong current of sentiment flows, not the less strong because invisible from the bank (*vide* the last conversation in *Tom Brown*, between Brown and East, and also the newer Harrovian tale, *The Hill*). If, then, these strong friendships—the heart's blood of the great Public Schools—these golden memories which do not fade in after life, are to bind together more closely to themselves and to their school the Day-Boys of England, it must be done mainly by "the picked few" playing together as unselfish comrades, week after week and month after month, for the honour of their School, and loving the ally with the heart of a brother. The "general mass" is the main body out of which "the picked few" evolve themselves, and they, too, reflect the tone of their elders and betters at play, and thus help to bring out the best that is in the boy-nature through the corporate games of the playing field.

Other and better methods could, doubtless, be suggested, only let them not be too elaborate—better no plan than too elaborate and complex a plan.

A short discussion followed, in which some of the practical difficulties of the *Town* School were discussed; and after a hearty vote of thanks, the Meeting broke up.

F. W. HARRISON, *Hon. Sec.*

WEST KENT.

President—DR. HAMILTON HALL.
Hon. Secretary—MISS F. M. WATT, 14, Calverley Crescent,
Tunbridge Wells.

The Series of Lectures arranged for this Session has been duly delivered. The list appeared in last Report, printed in the November issue. To this is to be added the following:—

On Saturday, March 24th, at 3 p.m., at the Town Hall, Tunbridge Wells, Prof. Earl Barnes will give an Address on "What Children Think about the Subjects they Study."

(MISS) F. M. WATT, *Hon. Sec.*

The Paidologist.

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Editorial.

Our readers will notice the reduction in size of our Magazine. After much consideration we have come to the conclusion that it would be more acceptable to our members generally to reduce the cost of publication than to saddle them with an annual deficit. But this reduction involves condensation, omissions, and literary terseness: for all these we appeal to their clemency, more especially for the postponement to the October number of Miss Innes' Paper on "Children in Literature" (which can now be obtained in pamphlet form from the Publishers) and of the Branch Reports. This number is nearly entirely devoted to Conference addresses and business.

Dr. Fletcher Beach has found it necessary, from pressure of work, to resign the Chairmanship of the Editorial Committee. We thank him heartlly for the interest he has taken in our Association and its organ, and hope he will continue to give us his support in ways which make less demand on his already overtaxed energy.

We trust that members will read and mark every detail in the Report of the Council Meeting. The Council desires the Enquiry into Infants' Schools to be prosecuted, and reported on at the next Conference. (Birmingham, Manchester, and Edinburgh have begun valuable work in this connection.)

Arrangements for a Child-Study Lending Library are nearly matured, and will be published shortly. We appeal earnestly for donations of money and books to this Library.

Professor Muirhead, of Birmingham University, has been elected President of the B.C.S.A. for the current year.

We would remind Local Secretaries that programmes for next session should be sent to Mr. Tibbey early in September.

M. L.

[*The Editors wish to remind readers that the views expressed in the various papers must not be assumed to coincide in all points with those identified with the Association.*]

The Presidential Address.

By Miss D. Beale, LL.D.

(*Delivered at the B.C.S.A. Annual Conference, May*, 1906, *in the Princess Hall, Cheltenham.*)

We are very glad to welcome once more the members of the Child-Study Association, and are especially looking forward to Dr. Slaughter's Lecture. We venture to hope that they will carry away pleasant memories. Our Garden Town is an ideal place for such meetings: large and small rooms are available—in close contiguity, in the centre of the town, and they stand not in streets, but in open spaces, with plenty of air and light. The Child-Study Society was founded in August, 1894. Miss Louch, returning from her visit to America, brought us fruitful seeds, which she planted in this town, and, to use an Americanism, Child-Study "caught on," though it had at first to encounter some ridicule. Gravely to observe our babies, and write down the day when the first smile was seen—to "set it down on tablets" and record the first articulate sounds for learned professors—instead of meeting the little ones with "becks and nods and wreathed smiles," and adopting ourselves a baby language, seemed too absurd; now we gladly learn from our Struwelpeter—as Head in Air he throws his thoughts into the stream of time, to float on into the broad ocean of philosophy. The establishment of such a Society as this is only one symptom of the change that has come into our way of regarding every subject from the evolution of worlds to that of a soul. We watch suns slowly taking shape and moving towards an unknown goal, and the great rock book tells of no sudden fiat but of the gradual building up and furnishing of man's dwelling-place. Botany is no longer a mere classificatory science, nor is the botanist a collector of dried specimens: he looks to Nature's laboratory and sees all in process—the physiology of the plant and the metamorphoses undergone by the individual are found to be related, and with untiring persistence the disciples of Darwin and Wallace trace the correlation of types in the animal kingdom. History is not a chronicle recording the deeds of men in the past, it is a story of the development of human intelligence. Art is traced from its rude beginnings through carved stone and pictured vase, and cunning workmanship. Language is no longer a study of how to classify and find the rules of grammar: that, too, is a science, with its own laws of mutation. At last, even what was once regarded as the prime basis of the objective world, the solid atom, is found to be disintegrating and ready to vanish away—things are no longer thought of as being, but as becoming πάντα ῥεῖ Clearly it was not possible that an age possessed by the idea of evolution could fail to study the evolution, the development of the typical child. The beautiful thought of Aristotle that the ideal is the real, that in looking at an organism we see not what it is now, but what it is destined to become; τὸ τί ἦν εἶναι seems for a while in the last century to have dropped out of sight. I have books scarcely more than a century old which give pictures of little men and women clothed in the garments of their parents; their characters are fixed as good and bad. Fear and punishment, not "interest," are supposed to be the most effective instruments in education—no hint is given of sympathy with poor Master Heady, evidently a dull boy. He will not "look at his book"; he is shut up in a dark closet, "not high enough for him to stand, and so short that he could only sit on a heap, with knees up to his chin, or stand stooping." For him there is no room to grow, and in this dismal situation he continues all day without food. Tommy Piper, clearly a born Socialist, claims bread as a right, and instead of saying "Pray be so good as to give me a bit of bread," he would say, "Give me a bit," and if it was not given he would scream. He refuses to be washed, so Mr. Makegood comes to the rescue, and we see him in cocked hat and laced coat administering a caning to a naked boy in the rainwater tub, in a way that would now lead Mr. Makegood into the meshes of the S.P.C.C. On the other hand, Master Truman is already perfect: he "always did as he was desired," and even when he visits Master Puny, and finds him indulging in bread-and-butter and cakes, provided by his misguided parents, Truman begs for a "piece of dry bread, because his papa and mamma did not choose that he should eat butter and cakes." Master Wise, five years old, "never did anything he ought not"—"he never cried for anything he wanted, nor asked for anything he saw other people have." Miss Mary Selfish, after eating a great deal of pudding, or a whole apple, asks her sisters for more. She is, for her greediness, placed by her mother in a pigsty. On the other hand, Miss Betsy Higgins walketh in her uprightness, holding up her head, and turning out her toes, so that everybody loved her. Miss Meekly "always did as she was bidden the moment she was spoken to." "I shall never forget," writes the enthusiastic author, "how she used to rub her shoes. She never fretted and cried, was always good-humoured, never asked for anything, never greased her fingers." The book concludes with the pious wish that all little boys and girls who read this pretty book will learn to behave like Master Henry Wise and Miss Polly Meekly. Connected with these pictures of the perfect prigs and the born rebels, we have a terrible eschatology, unthinkable for us, which represented the Father as consigning his children to fires which burned for ever, but neither consumed nor purified. For us it is impossible to believe that the incident of death is the reversal of all the laws we have seen at work in the universe—predestination to an eternal aimless torture is inconceivable for us. We can believe in a Purgatorio, not in an Inferno. But there has been a Renaissance in education,—our children are no longer museum specimens, and the loving sympathy, and the great thoughts, and the practical metaphysics of a Froebel, a Pestalozzi, a Herbart, have transformed the teachers and the schools. For us the supreme subject of interest is, as Browning has said, the study of the *development* of a soul. Art is never wearied of this theme: it is expressed in innumerable pictures of the worship of the ideal child, by the ideal mother, by the simple shepherds, by the wisest of Kings. And this child nature is to be studied no longer by the easy method of *a priori* assumption, but by the diligent collecting of facts—the binding them together by the power of loving interest. There had been many societies before 1894 which dealt with education in some form, but there was a new departure when the Child-Study Society came into existence, because (1) it is primarily occupied not with the environment, but with the soul itself—with the dynamics rather than the mechanics of education: it cast to the winds most of the things which occupy the attention of those who are not primarily teachers. It has nothing to do with Bills and Boards of Education, nothing with grants and salaries and pensions. (2) It is not a Society of Professors, but a recruiting centre for a vast army of volunteers drawn from all ranks, of some of whom it may be said that they were neither wise nor mighty: but weak things, things that are despised. Women specially enrolled themselves, and by their untiring observations furnished abundant material for the philosophers, as Madame Necker de Saussure, who, in her three volumes, gave the facts which formed the basis of the philosophy of Rosmini. (3) But, lastly, there was a ποῦ στῶ in the Clark University, whence Dr. Stanley Hall sent out his questionnaires; there was a psychological laboratory, and the information sent in was tested, and, if valuable, classified and reserved for use. We have found our Branch a success as compared with other

Societies. We have a Teachers' Guild, but scarcely any parents join, and education cannot be carried on in a one-sided way. It can be satisfactory only when parents and teachers understand one another, and work for the same end. We tried the Parents' Educational Union, but found that teachers held aloof. Then we took up Child-Study, and together, parents and teachers, doctors of the body and the mind, met to help one another in asking and answering questions. But it is not so much in the intellectual and critical as in the practical philosophy that such a Society is found to be a power, helping to bring home to all that the supreme good, the goodwill, is to be realised, not by fierce punishment for wrong-doing, but by the influence of loving parents and sympathetic teachers, through bringing the beautiful and the good into the closest relationship with the dawning life. It was a lovely thought that the babe should be awakened only by music—that only beautiful objects should appear in the nursery, and that the child should be protected from evil sights and sounds, so that from the earliest years a sympathy with the beautiful should be felt, and so become instinctive. Let me quote from the Professor of Psychology, Clark University :—" Education must begin at home. By beginning young enough a sparrow may be taught the song of a canary, but he must grow up in a canary's nest, and out of range of other sparrows' chirping. In the main, those children will love music who hear it day by day as they grow up, and those will love pictures who see them, and see their elders genuinely interested in them, and those will love Nature who can imitate a love of Nature in their parents and teachers. The love for Art or Nature is rarely caught by mere exposure to them, without this warming touch of human example. To many children they must speak with a confused voice unless the teacher interprets for them—not tells the children about them, and what they ought to admire in them, but lets the children see what she herself enjoys in them. I notice and enjoy the waves in a wind-swept grain field more, probably, than I would otherwise because of the pleasure that my father was evidently taking in them as he pointed them out to his children ; and I notice and enjoy the shadows of clouds drifting over smooth hillsides more than I should had not one of my teachers pointed them out with genuine pleasure. Such teaching cannot be formal, but from the point of view of its result in opening the eyes of children to the beauty around them it belongs to a different and to a far better order of teaching." Child-Study is not a mere academic exercise : it is a duty to which we are drawn by our affections and by our common humanity; but this is especially emphasized by two considerations—(1) the sense of responsibility towards those dependent, and (2) by the pressing nature of the obligation, for we recognise that life processes, unlike mechanical acts, are continuous: if a child does not grow teeth at the right time, no subsequent treatment will produce them. Even so, intellectual processes can be performed only at suitable eras, and the discipline and development of the emotional, moral, religious feelings need *continuous*, ever-watchful guidance and exercise. Let me conclude with some words from Dr. Stanley Hall, who has called the Society into existence, and calls upon us all to help in gathering the facts on which alone generalisation can be based: "Research is the watchword of the higher education. Like prayer for the Christian, it is its vital breath and native air. It assumes that the cosmos is a vast reservoir of laws and forces which we are only just beginning to know and to control. The investigator not only thinks God's thoughts after Him, but he must add to the sum of human knowledge, and as a condition of the higher academic life he must seek at some point, in the vast realm of knowledge, to be an authority and not an echo; to speak to the large world of experts outside college halls, and to challenge the concensus of the competent throughout the world. Only thus does he attain knowledge of what true intellectual freedom is, and become a member of the university invisible, not made with hands."

The Medical Inspection of School Children.

By WALTER R. JORDAN, M.D.

(A Paper read at the B.C.S.A. Annual Conference, May, 1906, *in the Town Hall, Cheltenham.)*

The subject which I bring before you to-day is one which is steadily forcing itself more and more into prominence, which has already aroused the attention of the Central Education Authority, and which, it would seem, must at no distant date be dealt with by the promulgation by that authority of a scheme making the medical inspection of school children obligatory on education authorities, and laying down principles of aim and method to be followed in such work.

The demand for medical inspection is one of the later results of the legislative institution of compulsory education. In the earlier years of this, the provision of schools and the working up of a high average attendance necessarily occupied available energy; a period of elaboration of the instruction given seems to have followed; and, more recently, the recognition of variations in the condition of the children who gathered to be taught. Thus a class of children of defective mental power came to be recognised, and, again, there were discovered children who, from defects of eye or ear, or from causes lowering the general health, were unable to take full advantage of the educational opportunities which had been forced upon them. The outbreak of infectious diseases and the spread amongst scholars of parasitic disorders further brought into consultation education authorities, teachers, medical officers of health, and medical practitioners generally. Hence there has begun a movement in favour of the systematic medical inspection of school children.

But when one essays to investigate the subject, it is at present only to be brought face to face with an incoherent assemblage of facts, theories, and suggestions. In some parts of the country the matter has been shirked altogether: elsewhere it has been taken up with different degrees of thoroughness, from different points of view, and with different methods of execution. An Inter-Departmental Committee, appointed on March 14th, 1905, by the President of the Board of Education, " to ascertain and report on what is now being done, and with what result, in respect of medical inspection of children in public elementary schools," found that medical officers for educational purposes have been appointed by six counties, thirty-five county boroughs, thirty-one boroughs, and thirteen urban districts. (This is eighty-five out of a total of between three and four hundred Educational Authorities.) Only in Manchester and a few other areas did the Medical Officer devote his whole time to the duties of that office: he frequently also held the post of Medical Officer of Health, and was very frequently in private practice. The Committee say, after summarising the results of their enquiries: " Generally we feel no doubt that the medical inspection has done much towards bringing to view defects, the treatment of which secures the child from unnecessary suffering, and may save him from serious trouble in later life." They say, further, that the results leave something to be desired, and that there is much room for improvement.

To show the state of things revealed by medical inspection I may quote from the *British Medical Journal* the experience of New York, where, since the re-organisation of the system of Medical School Inspection of the Board of Health on March 29th, 1905, the inspectors have examined 55,332 children, and have reported 18,182 cases of defective teeth, 16,394 cases of defective vision, and 8,182 cases of defective nasal breathing. Treatment was necessary in 33,551 cases. During the last year 88,964 visits were made to the schools by medical inspectors, and 18,844 children were excluded for contagious disease. Of this latter number 8,833 were for eye diseases, 4,692 for pediculosis, 2,018 for skin diseases, 312 for measles, and 74 for diphtheria. Nearer home very similar results are reported by Dr. Myer Copland, in Stroud, Gloucestershire; while in Cheltenham itself the report of the Health Visitor (Miss Salisbury) repeats the story.

With this indication of the present state of things and of the existence of a case for systematic medical inspection of school children, I pass to a consideration of the principles and some of the problems and difficulties involved. I am in no position to dogmatise—I wish only to call the attention of the teaching and medical professions and the public generally to the matter, and to submit points for consideration and expression of opinion.

I may say that I am now limiting my view to public elementary schools, as the problem is probably more difficult and more pressing in these than elsewhere. Also, that I am entirely excluding from consideration the question of the inspection of school buildings, as I consider this to be an altogether different thing from that of the inspection of the school-children.

It seems to me that the objects, upon the necessity for the attainment of which a demand for medical inspection of school-children may legitimately be based by an education authority, are these: to ascertain whether each child of school age is physically and mentally fit to profit by the ordinary educational measures, including physical training; in the case of those found unfit, to decide whether they require special educational measures to be used, or need to be excluded from school permanently, or temporarily with a view to medical attendance, or require medical attendance while continuing to attend school; to ascertain the presence of children suffering from disease communicable to others, and to exclude them from school attendance until they cease to be dangerous in this way; also to exclude children likely to become sources of infection, though not actually ill.

I believe I have included in this statement everything that could be regarded as in any way necessary from an educational point of view, and the expense of carrying out which could justly be defrayed out of the income of an education authority. It will at once be appreciated that the information requisite under the various heads can only be obtained with a considerable expenditure of time by skilled observers. The task is too great for any extension of it to be contemplated, such as anthropometric records for the satisfaction of persons who distress themselves about a supposed physical deterioration of the race. That, incidentally, some elementary records of the kind may be accumulated is likely, but at the outset essentials only must be undertaken.

What are essentials? In an elaborate work on "The Medical Inspection of School-Children," by W. Leslie Mackenzie, Medical Inspector to the Local Government Board for Scotland, there is given a revised schedule for examinations, which, in the author's opinion, constitutes the essential residue of a schedule actually used for the purposes of a Royal Commission on Physical Training (Scotland). It is, indeed, difficult to see how anything can be omitted in order to give form to the hitherto vague ideas I have been suggesting, from what I will now quote, so far as the main headings are concerned.

I. Address, Occupation of Parents, &c.
II. School Standard or Class.
III. School Attendance.
IV. Physical Exercise.
V. Personal Appearance.
VI. Cleanliness.
VII. Measurements.
VIII. Teeth.
IX. Eyes.
X. Ears.
XI. Nose and Throat.
XII. Deformities.
XIII. Diseases.
XIV. Other Observations.

"Inasmuch as Medical Inspection where in practice hitherto has, to a great extent, concerned itself with the discovery of the feeble-minded and mentally-defective generally, it is, perhaps, surprising to find in the foregoing an apparent omission of this matter, except for the record of a teacher's opinion. As, however, a special Act has provided for special treatment of such children, it may have been thought that they were to be considered separately. But, obviously, the medical examination on first admission to school affords a great opportunity for detecting at least the worst of such children, and there should be an addition to the Schedule in this regard. When discovered, such children will receive a further special medical examination.

"I suggest that it is desirable,—in fact, an urgent necessity,—that in every public elementary school there should be a medical examination of each child on its first admission, on lines such as are laid down in this Schedule, that there should be a re-examination of each child every twelve months, and a special examination of any child returning to school after an absence through illness of more than three days' duration, or of any child when desired at any time by a teacher.

"The legitimate objects of medical inspection, as I conceived them, arranged themselves under two heads—the fitness of the scholar for education, and the prevention of the spread of disease. The suggestion I have just made covers the first of these. The second is only in part so covered, and requires also a special scheme of notification to Medical Officers of Health.

"Legislation should make the inspection compulsory—optional Acts are detestable—and should give powers of examination, with immunity from subsequent legal annoyance for the Examiner, and, as a corollary, powers of exclusion, with warning to parents of the condition of children, and probably, if the whole thing is not in many cases to be abortive, should penalise parents for neglecting to take steps to ameliorate defects found in their children after proper warning given. It should also provide for a system of notification."

Who is to carry out this work ? We have already seen that of existing medical officers for educational purposes some gave their whole time to these duties, some were also Medical Officers of Health, some were in private practice. Is there any preference amongst these possibilities ? With regard to this, I think it of the highest importance that a medical man whose duty it is to examine children should be one who has had, or is getting, considerable experience in the diagnosis and treatment of disease in children, which implies that he must be, or have been, in actual practice. Objections to school medical officers being themselves in actual practice are based on the possibility of collision between the school officer, in the discharge of his duties, and neighbouring practitioners, and on the further possibility of his duty as school officer conflicting with his desire to please and oblige his own private patients—parents of children at school. There is, of course, some point in these objections, and if we regard them we incline to the appointment of a man who is school officer only, or is also M.O.H. The former is, perhaps, the best possible solution, provided always that he satisfy the requirement of actual experience of sick children. A M.O.H. would probably rarely satisfy this requirement, as such men specialise early, and have rarely been in actual practice. Moreover, Medical Officers of Health are not idle men, and could not possibly undertake the additional work, while if a deputy or assistant were to be appointed, he would be best appointed as a special medical officer for schools.

My own personal feeling is in favour of a chief school medical officer to organise and control the work, and a staff of practitioners allotted amongst the various schools of the district, but local needs and circumstances have to be taken into consideration, and probably, at the outset, the obligation to appoint a medical officer or officers would have to be imposed without restrictions as to their practising or not.

The co-operation of teachers is essential to successful working of the scheme. Some portions of the schedule of examination may be filled in by the teacher: while in the work of early notification the teacher must play an important part. Observation and selection by teachers of children requiring the attention of the medical officer, while to some extent superseded by the institution of routine examination, still remains as a valuable occasional aid in the work.

Difficulties and drawbacks in any such scheme there must doubtless be, and of these I may mention the possible objection of parents to having their children examined. Tact and sympathy on the part of all engaged in the work will probably overcome this to a great extent, and the final appeal to the fact of the examination being compulsory, as I would have it, need rarely be made.

Treatment, of course, is not contemplated, and I have already mentioned the necessity of making it punishable for a parent to neglect to get treatment for his child, after due warning of defects discovered. This would secure that the advantage of inspection shall not be nullified by parental apathy, and so meet another difficulty.

But there is one great difficulty in the way of adoption of compulsory medical inspection, and that is, of course, expense. Medical inspection would have to be paid for, and to be well paid, and Education Authorities are shy of increasing their expenditure. In the scheme I have suggested I did not allow my imagination to be clogged by any thought of expense, and, frankly, I have no notion what the expense would be. I am told that in Birmingham alone there are some 100,000 children attending school: there are, say, ten years of school life. So there would be 10,000 entirely fresh examinations every year, not to mention re-examinations and special examinations. In New York, where, in 1904, some such examination as that outlined in our schedule was undertaken in four schools, one doctor did about six children a day: suppose that organisation and practice raised this number to ten. Ten doctors could, at this rate, get through the fresh examinations in one hundred working days, which is, I suppose, about half the number of days that the schools are actually open in a year. Would the reasonable remuneration of ten experienced medical men, for their whole time, come to a sum to which the authorities would never agree ? I can only hope that there is something wrong in my calculations.

We might compare with what I have suggested what is actually being done in Birmingham at the present time, which represents, I suppose, the limit of expenditure to which an advanced education authority, with good traditions, is prepared to go in this matter.

A physician in consulting practice acts as medical officer to the Education Authority. He visits the ordinary schools once a year, and confers with teachers as to children to whom they invite his attention. He also visits schools on occasion in connection with outbreaks of infectious disease, and at times visits school buildings to consider points of sanitation, ventilation, lighting, etc. He visits the special schools for mentally defective and crippled children at least three times a year: and also examines all cases for admission to these schools. He is consulted also about the health of the teaching staff.

In addition, a medical woman is wholly occupied in visiting both Council and other Schools, to pick out children, primarily on the initiative of the teachers, for the medical officer to examine as to their suitability for admission to the special schools for the mentally defective, crippled, deaf, or blind.

Deaf or blind children are occasionally referred to ear or eye specialists.

This is a long way off routine inspection of every child. But if nothing more can be done, surely the results obtained by education authorities who have appointed Medical Officers show that what has been attempted by some eighty-five authorities should at least be done by all. The question of expense would probably have to be met by special grants from the national exchequer, as, undoubtedly, some districts are heavily oppressed by existing education rates. With ever-increasing facilities for and tendency to migration from one part of the country to another, education becomes more and more a national, less and less a local, concern. The all-important point is that a beginning should be made towards a system of universal inspection of school-children.

These remarks are very tentative, and suggestive only. The best way and the most practical way of dealing with the problem must be evolved not from one's inner consciousness, but by actual trial. I have achieved my object if I have succeeded in convincing anyone not previously interested of the importance of the subject.

WALTER JORDAN.

Reform in Infant Schools.

By A. S. BYETT, L.L.A.

(*A Paper read at the B.C.S.A. Annual Conference, May,* 1906.)

Debates on education in England always seem to revolve around two centres, the Religious difficulty and the Money difficulty. Of the former the papers are now full, and it appears to be discussed from the point of view of everyone except the person most concerned—the child. Upon that difficulty, which I may say, in passing, is a platform and political difficulty, and does not exist in the schools, I do not propose to touch. The money question also I shall leave severely alone, except in the indirect assumption that most reforms need a money basis. Considerations of grants, allowances and cost per head per annum may, however, be relegated for the moment to the background. There are plenty of people who will think of these things: there are some in very high places in the educational world who think of little else.

We will assume, for the purposes of this paper, that we have an Education Authority like those of which you may read in an Educational Blue-book,—a Blue-book, not a fairy tale, where it is soberly written down: "There was evidence everywhere of a keen desire on the part of municipalities to spend freely and even lavishly on education. The German parent would as soon stint the mental food of his children as he would their daily bread."

In another Report, that of the Moseley Education Commission to the United States, it is written: "In America there is a universal belief in education, and a universal zeal in promoting it. The expenditure of money on education is generous to the verge of extravagance. States and municipalities vote funds for the purpose, without stint, sometimes as much as one-third of their revenue."

In Birmingham, a city liberal as English cities go in this respect, last year the expenditure on education was one-twentieth of the revenue.

The subject of Infants' Schools has been brought prominently before the public lately in connection with a minute of the Board of Education of March, 1905, giving permission to local authorities to exclude, if they wished, children under five from school. This minute was based on the Report of six women Inspectors appointed by the Board of Education to inquire into the condition of these children in schools, and it gave rise to a great deal of discussion as to whether children under five should, or should not, be retained in school.

You may have noticed that the discussion was concerned chiefly with the loss or gain in money to the district, or the convenience to the mother of being relieved of the care of her children for some hours of the day.

Very rarely was the opinion of medical men, psychologists, or physiologists, as to the effect of school life taken into account, nor was the suitability of the school as a place for children of such tender years considered: and this, although the Report above mentioned, states in the most definite manner that in the opinion of the writers children were injured rather than benefited by their attendance in school at so early an age.

Abroad, when provision has to be made for children too young to begin the ordinary school course, it takes the form of Kindergartens in Germany, *Ecoles Maternelles* in France, and institutions of a modified Kindergarten type in America. These appear to meet the needs of young children far more wisely and kindly than our Infant School does.

In Frankfort, for example, a private Society provides three Kindergartens, one at which a fee was charged, two free. "All the arrangements were homelike," says the Report to which I referred just now: "there were ten children to each adult-trained teacher, and what struck the visitors most was the exhausting character of the teaching. There was a large garden attached, with a sand-pit, in which the children could dig, and every arrangement was made for cleanliness and comfort."

In the *Ecoles Maternelles* of France the children are taken care of for the twelve hours of the mother's working day. These are combined shelters and schools, and children are received between the ages of two and seven. They are usually built with a large hall on the ground floor, furnished with moveable tables and benches. This is used as a dining room. Out of this opens the kitchen and class-rooms. The rooms are bright, clean, and airy, hung with pictures, and built so that all windows open on to the playground, to secure quiet during lessons. The playgrounds are planted with trees. The actual school hours are from nine to four, with a break of an hour-and-a-half at midday, a quarter-of-an-hour for play during the morning session, and half-an-hour in the afternoon. Half-an-hour at the beginning of each session is devoted to inspection of the condition of the children, to washing, and attention to physical needs. This leaves three-and-three-quarter hours for school occupations, which are such as train the hand and eye without undue strain. Flower-making, knitting without pins, and weaving with the fingers, are mentioned. A warm dinner is served every day at a cost of a penny to twopence. The poorer children pay nothing, but no one except the Head-Mistress knows which children are exempted. There is nursery accommodation for the very young ones.

In the United States provision is made for a small number of very young children, *i.e.*, children under six, in what I termed modified Kindergartens, institutions inspired by Froebel's ideas, but not slavishly following his methods. These are frequently in connection with "neighbourhood houses," "guilds," "homes," "settlements," and similar institutions. Here is an account of one in Chicago, taken from the Report of the Moseley Commission.

"There are three teachers in charge of twenty-four children" (and I would remind you that in the States there are no Pupil Teachers. In the States education is not regarded as work for children. All the teachers are highly-trained, qualified adults). The time-table of this school is as follows :

9 to 9.30.—Handwork. Cookery one day a week.
9.30 to 10.—Songs and Stories.
10 to 10.30.—Handwork.
10.30 to 10.40.—Follow the leader, while windows are opened, rooms aired, and so on.
10.40 to 11.15.—Luncheon (not quick—35 minutes).
11.15 to 11.45.—Games and Rhythms.

Morning concludes with dressing for dismissal. The handwork includes any constructive work, play with blocks, drawing, painting, clay-modelling or work in sand or other medium. Outdoor excursions are taken during this time.

The children serve the luncheon each day, and take entire charge: they set the table, serve, and wait upon each other, wash and put away the dishes. Lunch consists of one tablespoonful of a prepared cereal, served with cream and sugar, a biscuit and small glass of milk, or, on cold days, a cup of cocoa. The cost of this is £1 a month for children and teachers: but I could not discover who defrays the cost.

These are some of the ways in which other countries are meeting the problem of very young children whose parents are compelled to find shelter for them somewhere during the day. In no other country that I could discover has the Government encouraged parents to shirk their responsibilities for the care of these little ones by offering a grant for their attendance at school.

Even the Colonies, whose educational systems have been largely based on our own, and who have copied in some cases its worst features, payment by results, uniform syllabuses, and so on, even the Colonies do not expect a child's school life to begin before the age of six.

Dr. Whiteside Hime (Bradford) said, in his evidence before the Royal Commission, "it was essential that children who are compulsorily sent to school should be protected from physical or bodily harm. To effect this, considerable reforms were called for in the system in vogue. Children were sent to work in schools at an age which was improper, and an amount of work was imposed on them which was impossible, and was highly injurious. Serious as must be the effect of such a system on children, say of ten or twelve, how much worse must be the effects on infants of the most tender years, of whom thousands were still sent to school daily for five hours? Such a system was to be condemned on all grounds—as affecting the child's physique and physical development. It was also to be condemned for its effect on parents, who accepted it as a boon in enabling them to get rid of their children, and leave the discharge of maternal duties to others—strangers—which tended greatly to the deterioration of the mother, and to destroying the idea and actuality of home. The over-crowding of infants in school was a common evil. He had counted eighty-four sitting in one room, with an average distance of eighteen inches from mouth to mouth. Playing at large in the gutter would be a beneficent change from such a 'play-room.'"

In this matter I venture to think England has blundered. but not beyond redemption. The age of leaving school has been raised all over the country since the passing of the

Education Act of 1870. The age of beginning school might now be reasonably postponed. It should not be assumed that children under five will, in the large majority of cases, need other provision than the home, where they can be free to play, free to run and roll, and chatter and sing, free to watch the life of the home, the street, and the garden, free to ask questions, free to sleep. *Freedom from constraint* is at that time of life more important than any small rudiments of school learning or discipline the child might acquire. Sunlight, fresh air, movement, free play, free conversation, sleep, —these are necessities for the normal growth of a little child.

How far can these requirements be met in school? It is not fair in this connection to judge by a few recently-constructed suburban schools, where there is an attempt to reach a higher standard, although they still leave much to be desired. We must remember that the large majority of Infants' Schools have been built many years. They are far below even the modest standard of the newest Council Schools.

In proof of this, one need only refer to the Report of the Women Inspectors before-mentioned. These six women were struck, as any outsider is usually struck, by the difference between children in and out of school. The unnatural silence imposed, the long hours of sitting still, the unreasonable curriculum, the crowding, the bad ventilation, absence of sunlight, want of space for play, unsuitable seats and desks, —the reports are full of these things. Here are a few extracts:

"It seems extraordinary to me what pains local authorities take to exclude the sun when planning and building schools. Hundreds, nay, thousands of children in this sunny realm of England, children belonging to an Empire on which the sun never sets, are condemned to spend their school-days in rooms where the sun never shines."

"The chief faults in the Baby-rooms are the large size of the classes, the lack of sufficient physical exercises, the insufficient changes of posture, air, and scene, the repression of originality, the use of unsuitable occupations, which cause too long a strain on the muscles and nerves of the body. Many of the rooms are due north or north-east, thus practically sunless. The windows are few, and generally placed high, to prevent the sun's rays, if any, penetrating inside, or the children from seeing shrubs and flowers, if any, outside. They are often on the street side of the building, so that air from the street may enter, and the noise from passing vehicles annoy as much as possible teachers and taught. The Baby-room is often the farthest possible from the playground, necessitating the opening and closing of as many as five doors, and a long journey across the desert of asphalte, sometimes through snow or driving rain, or in darkness and fog."

"The furniture chiefly consists of a huge gallery, constructed to hold forty to sixty, but often containing as many as eighty. In rooms of this type the class can have little scope for movements of the right kind, and the children suffer physically."

"Ventilation is, as a rule, inadequate."

"Thousands of children are using desks that are either too low or too high for them."

"Free space for play. Very little provision exists for this. Fifteen out of thirty-nine schools have none at all."

"Heating apparatus. This is constantly inadequate."

"The children are often cooped up on galleries, sometimes for one-and-a-half hours or more, too often crowded, and without back rests. Frequently, if one in the row moved, those at the end fell off."

Every teacher knows that the evils mentioned in this Report are by no means exaggerated. Take, for instance, the overcrowding. A case came to my knowledge recently of a Voluntary School where, in a Babies' Room, built, the teacher thought, for fifty—the gallery would seat fifty,—the average attendance during a large part of the year was over ninety. Last summer the numbers rose to a hundred, a hundred and ten, a hundred and twenty, and on one terrible afternoon there were one hundred and thirty-two in attendance.

The floor space was filled with desks, constructed for seven-year-old children, consequently the little ones had to be lifted on and off the seats. A certificated teacher, with an Article 68 to help, was responsible for that class.

Think of the irony of putting into that teacher's hands a copy of the *Suggestions to Teachers* issued by the Board of Education a few weeks earlier, where free play, active movements, and individual conversations, are insisted upon.

You will agree with me that the most important part of the equipment of any school is the teacher. It is a positive wrong to compel any child to spend hours every day of the most sensitive and impressionable part of its life looking at a cross, worried, tired face, and listening to a harsh, scolding voice. Yet how can any girl be expected to be smiling and cheerful, kind and loving, all day and every day, to a huge mass of wriggling infancy, which must not only be "made to sit still and pay attention" (the words are from an Inspector's Report), but must also be prepared for examination. For these one hundred and thirty-two unfortunates have to be examined not only in the three R's, but also in

Religious Knowledge, and a grave clerical person sends in a report on the accuracy or otherwise of their acquaintance with Scripture. If we would secure for the children a cheerful, sympathetic teacher, who can diffuse among her pupils that sunshine of the heart for which the souls of little children crave, as their bodies do for physical sunlight, we must not give her an impossible task.

In the Frankfort Kindergarten, you remember, there were ten children to each teacher, and the visitors were struck by the exhausting nature of their work. It *is* exhausting work to mother ten eager, active, little children for five or five-and-a-half hours every day, to keep them happy and amused, to care for their physical well-being, to train and satisfy their mental needs. Let anyone who doubts it spend a day with even four or five out of school. Mr. Herbert Spencer is said to have done so once, and to have modified his opinions on the subject of corporal punishment very considerably in consequence.

It seems as if every mention of Infant School Reform brings us to this question of numbers. We recognise more and more that all considerations of right methods, right treatment, even of right equipment, resolve themselves into questions of numbers. We may lay it down as an axiom that children cannot be educated in batches of sixty or more, or even less. The needs of the individual are in such a class altogether subordinated to the urgencies of discipline and results. The younger the child, the more is individual care required. Older children suffer less from military rule and discipline; but for infants the methods of the drill-room are unsuitable.

Again we find other countries in advance of us.

"A class of over seventy," says the Moseley Educational Commission, is almost unknown in America. Superintendents and teachers were practically unanimous in asserting that the greatest number with which really good educational work can be done is forty, and that anything in excess of this imposes too great a strain on the teacher. In England it is thought the younger the children, the larger the number which can properly be placed in charge of one teacher. In America, I am glad to say, the opposite view is almost universally held that the younger the children the more is individual attention required."

"In New York, where, owing to the enormous increase in population, the greatest difficulty has been experienced in making school accommodation sufficient, the average size of the class in the elementary school is forty-three, in the

Kindergarten twenty-eight. Sooner than have large unwieldy classes, the Americans resort to the expedient of half-day schools, where one set of children come in the mornings, another in the afternoons. Undesirable as this is in some respects, they feel it better that the child should be well taught for half-a-day than ill-taught for a whole one."

Where this method is employed, there are two sets of teachers.

Assuming, then, that each teacher will be responsible for a class of reasonable size, the next consideration is the school-building. On this point no one needs to be convinced of the immense superiority of the class-room school.

The old type of school, still, unhappily, the type of the majority, where three, four, or even five and six classes work together in one large room, has long been obsolete in theory. Monetary considerations stand in the way of the conversion of these schools into a better type. In some cases class-rooms could be added, the numbers reduced, and the large room retained as an assembly hall or play-room, and a reasonably good school would be the result. In others, the only remedy appears to be the one suggested by an Inspector who had reached the end of his patience with reference to a school which he had reported again and again as unsuitable, insanitary, and a death-trap in case of fire. The Board of Education sent him the correspondence in which the Managers proposed a number of tinkering alterations, and asked if these alterations met his view as to what was required. He replied that in his view what was required was a charge of dynamite under the foundations. That is a method of alteration, however, adopted by the Board of Education less often than circumstances seem to call for it.

Teachers who have worked in class-room schools are unanimous as to their many advantages. The comparative ease and absence of strain to the teacher, the more natural relations between teacher and taught, the better influence secured when the teacher has undisturbed control, the greater confidence and naturalness of the children working in small numbers, the possibility of laughter, of mutual help, of freer movements,—all these things render one school a paradise compared with the other.

The actual teaching is chiefly done in the class-room, where there should be no gallery. The man,—it must have been a man who invented galleries for schools,—was the type of person who considers a child in school as a being whose end and aim in life is to sit still and be lectured at.

The more our methods of teaching grow away from the lecturing type,—and they have, happily, grown a good way now,—the more antiquated and unsuitable do galleries become. They occupy too much space, they limit possible movements of the children, and stereotype the formation of the class.

Dual desks, with backs and foot-rests, are better: but these are clumsy and difficult to move and re-arrange. For the youngest children, small, light chairs are preferable. They can be moved by the little ones themselves from place to place, and permit of various ways of grouping the class, in circle, semi-circle, or round a table. The tables could be of light wood, large enough to accommodate ten or a dozen children, and fixed on low trestles, so that they could be removed and stacked away in small space when not in use.

For the upper classes, single desks, with backs and foot-rests, are the most convenient kind of furniture.

The aspect of the windows is an important matter, too rarely considered by the architect of our schools. Every room needs to have all the sunshine obtainable at some part of the day, and the amount of light must be regulated by blinds. It would be an immense gain in comfort if the windows could open on to the playground instead of the street, and in that case there could be no need for placing them so high that the children can see nothing through them but clouds. When our playgrounds are transformed, as I trust they will be, by having one part converted into a garden, planted with trees and flowers, the surplus from the parks and town gardens, when they have, as they might, at small cost, a fountain playing during school hours, the mere opportunity of watching through large, low, spacious windows, the changes of the seasons, the aspects of the weather, the coming and going of the birds who would be attracted to the playgrounds under such conditions, such opportunities would furnish endless subjects for observation and topics for conversation, and would create in the children that interest in Nature, and foster the habit of observation of Nature, which is one of the most fruitful and enduring pleasures in life.

In one large German city, as you may read in the special Report on Education in Germany, each elementary school was provided with a large playground, in which the centre only is used for play. All round the boundary wall the ground is planted with trees, shrubs, small beds of flowers, vegetables, and field crops. Children do not work in these gardens, but use them for purposes of observation, and the teacher obtains from them specimens for illustrating lessons.

Why should not the bare, shelterless, wind-swept deserts, our playgrounds now are, be transformed into agreeable and humanizing places by the presence of some growing trees and flowers. In the country this is already done occasionally. In towns, now that our schools are all to be under the care of the Council, this might be part of the work of the Parks' Committee, and would involve little extra cost.

Returning to the class-room again, in the large sunny windows I have described, plants could be grown, in whose development from the seed or bulb the children take the keenest interest, and learn more by watching the various stages of growth than they would remember if told in any number of lessons.

Teachers are frequently hampered by the lack of funds for the purchase of suitable plants and flowers. I think, if the ladies of the community who are interested in education, were to form a society similar to one which exists in Ontario, for the purpose of helping teachers in various ways, it would be easy for this and many other things, a little outside the scope of the Education Committee, to be done. There are superfluities of floral wealth and beauty in many gardens and conservatories which would gladden the hearts of children in slum schools. A teacher in one of the East End schools of London told me of a visit paid by Earl Beauchamp when he was member of the L.S.B. He noticed the dinginess and squalor of its surroundings, and a day or two later sent from Madresfield Court a large hamper of magnificent roses. Said the teacher, enthusiastically, "Our school was like a palace for a week."

Plants, flowers, pictures, are necessary. The latter offer many difficulties. A picture should surely be beautiful. Most publishers and many committees think it should be merely useful. The usefulness of beauty is a point on which Education Committees need educating.

Manchester has just made what is, I believe, a new departure in decorating its schools. Their plan is as follows: "Twelve pictures are lent to each school department, and at the end of six months are replaced by another set of twelve pictures, and are moved on into another department in the same or a neighbouring school. Thus every half-year each department receives twelve pictures, which have the interest given by novelty for teachers and scholars. For convenience of circulation we have divided Manchester into five districts, each of which has, or will have, the same number of pictures allotted to it. Another very important part of our system is a new kind of Art Museum, which is connected in as many ways as possible with every picture lent to a school, and to which we hope that teachers, pupil teachers, and scholars of every one of the schools near the Museum to which the pictures are lent will come several times a year."

Such a scheme will, doubtless, commend itself to other cities which possess Art Galleries or collections of pictures. Where these are not available, there are reproductions of good pictures to be had at a comparatively cheap rate : and these, if few in number, would more suitably furnish a school wall than the ugly little German oleographs, and still worse, uninteresting maps and charts, too often their only ornament !

Next, we come to consider the occupations of the children in school, and the provision made for these.

A child admitted into school at the age of five should not be too suddenly introduced to school routine or expected to set about mastering the three R's. It has more important things to do. Its brain is growing rapidly in bulk, and suffers if too early stereotyped by continuous application even to comparatively easy tasks.

Its senses are not fully developed, but need to be strengthened by continuous exercise upon the infinite number of things provided by nature and life for its examination. Its curiosity is endless, and in a natural state expresses itself by asking, as Kipling says :

> " One million Hows, two million Wheres,
> And seven million Whys."

Its developing muscles need active exercise, and its faculty of imitation makes it the " sedulous ape " of all that passes around.

Such a child needs careful initiation into school life. The change from the freedom of home to the constraint of school discipline must not be too abruptly effected. There should be a homelike atmosphere about the early classes, toys to play with, picture books to look at, opportunities for talk, and plenty of fun and laughter.

It would be an improvement if each class-room could be provided with lockers within the children's reach, where their toys, picture books, and other things, could be taken out and replaced by themselves. Not only would this satisfy the child's love of doing things, but would train them in habits of order, tidiness, and self-help.

The period spent in the Infant School is one of rapid growth in those four great areas of the brain known as the *speech centres*. The faculty of speech, of hearing and imitating spoken language, of learning words and combinations of words, of training in the right use of words, this is the distinctive work of the Infants' School. Songs, recitations, conversations, story-telling, by the children, as well as by the teacher, these should occupy a large part of the school day. Intervals for free play, and organised games, should form breaks between quiet lessons; and there should be a time when children have bricks or tablets, or other material, to play with as they like—not by drill, right hand up, touch right-hand top brick, and so on,—but making something to suit their own fancy.

A sufficient supply of untearable picture books to go round will form another occupation for a sitting down lesson, and eagerness to know about the pictures gives the first stimulus to the desire for reading. This is the best introduction to books, if you want children to love them. They will associate pleasure with books from the first, and not receive their first impressions from dismal primers of the "*Am I to go up? He is to go in*" type.

For the upper classes a generous provision of story books, picture books, and poetry books, for the children to use by themselves, leads to better and more intelligent reading. Slates, those unhygienic relics of a barbarous age, when paper was dear, should be banished to their proper place—the roof. A plentiful supply of paper for writing and drawing, with pencils, coloured crayons and paints, are the materials best suited for children's use. Pen and ink require more developed hands for their proper manipulation. To introduce them too early is to foster incorrect methods of holding the pen, which, I am told, try the heart and grieve the temper of teachers in the senior schools. For the same reason, and for others connected with eyesight, needlework is better deferred until the child is transferred to the Girls' School.

For the early lessons in numbers a great deal of experimental work in counting objects, arranging them in number, patterns, adding, subtracting, multiplying, dividing actual concrete things, forms the best and surest foundation for arithmetic. Balls, bricks, tablets, beans, and similar small objects are needed for this occupation.

Rulers for measuring, coins for playing at shop, to learn money values, weights and scales, are also helpful as preparation for the work of the senior classes.

Letter games, number games, forming letters in sand or cardboard, lead on to the more regular lessons in reading, writing, and arithmetic, but throughout the Infant School Course, and I venture to think in the lower part Senior schools also, there should be ample opportunities for conversation, story-telling, song, and recitation, and a generous allowance of play.

The mention of play brings me once more to the playgrounds. As places to look at, they leave much to be desired; as places to play in, they are also capable of improvement. Shade for sunny days, shelter from sudden storms, seats for resting on after a vigorous game, are rarely provided.

For the many days when play out of doors is impossible, room for play in school is urgently required.

Authorities have never yet, it seems to me, realized that play is the serious work of a young child. It is a necessity, not a luxury; and provision for play in an Infants' School is as much part of its proper equipment as are books, paper, and pens for older children.

A central hall can be used by successive classes, but is rarely large enough for more than one at a time. Very few class-rooms have sufficient floor space for a good game, especially if cumbered with a gallery.

We know that lack of suitable provision for play entails, in most schools, loss of play on wet days. At most, the children are allowed to sit in the desks and talk. The change of air and scene, the purification of the rooms, the chance of vigorous exercise of limbs and lungs, are lost. All teachers know the restlessness and inattention following on this loss of play. There is accumulated energy, which, if debarred from its rightful use, will find vent in naughtiness.

A large, light, airy play-room should be an adjunct to every Infants' School, as a gymnasium is to every properly equipped senior school. The furniture need be of the simplest. Low lockers for the toys, skipping ropes, reins, tops, whips, one or two low swings, and rocking horses, with a few small seats, are all that would be needed to make a paradise for the little ones.

The floor-space, I must repeat, is insufficient in every Infants' School. The Government demand eight square feet per child. In Germany, the States, and the Colonies, the smallest requirement is twelve square feet, and in some considerably more, even to twenty-five square feet per child. Think of the comfort if only one-third additional floor space were added to each room. The cubic space should be correspondingly ample, and a thermometer should be part of the furniture of every room. The lowest temperature in which infants can work with comfort is 60 degrees, but most of us think we are lucky if we can secure that on frosty or East-windy days.

Another reform I should like to see brought about is the introduction of the doctor and the nurse. My experience, extending over many years in large town schools, leads me to believe that 90 per cent. of the children formerly classed as dull are really suffering from some often remediable physical defect. Under present conditions, a child may be half blind, and suffer in consequence from continual headache as the result of eye-strain, or he may have adenoid growths which render him partially deaf, or he may be insufficiently nourished, or insufficiently rested, or suffering from some incipient illness, or half recovered from some disease, and the teacher, untrained to recognise the symptoms of such disability, only knows that he does not respond to her efforts, and classes him as dull. The improved health and spirits and increased mental activity resulting from attention in some cases to eyesight, in others to the removal of adenoid growths and similar physical defects, have convinced me that time and money would be well spent on a thorough medical examination of every child before or soon after admission into school.

With classes of such overwhelming size as most teachers have at present, it takes much time, and more careful observation than many teachers can give, to discover when a child is suffering from these defects. Even when discovered, it is frequently difficult to secure medical attention. Often the parents are too poor, and sometimes too ignorant, to attend to what seems to them a trifling defect, though to the child it may mean a life-long disability.

I do not need to labour this point, which has been dealt with so efficiently and convincingly by Dr. Jordan, so I will merely add, as an indication again of our backwardness, that in New York, Chicago, and other large American cities, the Public Health Department *sends a doctor and a nurse to each school every day.*

With this I must bring to a close this brief sketch of some of the most important reforms needed in our Infant Schools to-day. I have laid stress on what seems to me the essential things, but I am well aware that there are others highly desirable.

I do trust that as a result of this Conference, all teachers present, and all members and visitors who are interested in Infants' Schools, will make a strong effort to secure their betterment, especially in the points I have mentioned—the provision of more space, more sunlight, more air, smaller classes, abolition of galleries, comfortable seats, accommodation for play, a generous allowance of toys, picture books, and flowers, and the beautifying of the school and playground.

The Library.

BOOKS RECEIVED.

The Pedagogical Seminary. Vol. VIII., No. 1. March, 1906.

The principal article in this issue is entitled " A Study in Personal Hygiene." This enquiry included such matters as habits of food, sleep, dress, exercise, work, fears as to disease, care of the person, experience of opiates, drugs, quacks, etc. Four hundred and fifty replies from students and teachers in the higher institutions of learning and from physicians and druggists were received. The whole subject is intimate and personal, and it is admitted that there was difficulty in obtaining information, and that there was obvious reticence in the answers given on such subjects as the toilet, patent medicine, quacks, and sex hygiene. The paramount importance of personal health justifies the investigation, and the evidence, pointing to a wide diversity of belief and practice in such matters, makes interesting reading. One conclusion made by the writer of the article is that there is a lack of knowledge of the fundamental laws of physiology and hygiene, and not enough study of one's own personal limitations. The effect of morbid mental conditions, *e.g.*, fear, anxiety, worry, is apparent in the evidence, and a widespread dependence on drugs, especially on patent medicines, is shown. The writer feels there is a vast amount of ill-health, and comparatively few have much health reserve. The latter conclusion may be only one more piece of testimony to the over-stimulating conditions of American life.

A second article is called, " Remarks on the Psychology of Clothes." It gives the results of a study which sought to measure the effect on our subjective life that our clothes have. Many interesting points are raised, though the writer admits that " there is an air of sameness about the answers which indicates inexperience in analysis and introspection." The article is of value chiefly as showing how many problems in personal and social psychology are involved in the question of clothing.

Another paper bears the title, " Imaginative Elements in the Written Work of School Children." Three thousand compositions, selected from a given list of subjects, were read, with the object of obtaining data on the growth of the imagination in school life. The various kinds of sense images were noted, together with more complex types under the head of Scientific, Fairy Story, Nature Myth, Heroic, Dramatic, Religious and Melancholic images. The conclusion is that the only type of imagination that shows a substantial growth during the school period is the visual and this is robbed of vitality. The explanation assigned is the premium placed by the school on mechanical exactness and formal expression which thus hinders the expression of the deeper self. On the other hand the writer of the article does not seem to have placed sufficient emphasis on increasing reticence in the growing boy or girl ; for while the emotional life becomes deeper and more complex during the early years of adolescence, the individual shrinks more and more from even the kindliest observation of those who are not on his level of understanding and experience. S. Y.

The Training of the Twig. By the Rev. C. L. DRAWBRIDGE, M.A. pp. 191. 6d. net. Longmans.

A new and cheaper impression ; a first edition having appeared last year.

This is a book intended to instruct parents and teachers in the art of presenting the truths of religion to children. The book deals with what are commonplaces to the trained and experienced teacher, but contains many useful counsels to those who have no training and little or no experience. The style is simple and clear, and the directions as to how to question and to illustrate, how to avoid vagueness and awaken curiosity in the learner, with other suggestions as to how to maintain order and attention in a Sunday School class are in the main sensible, and should be helpful. S. Y.

The Function of Words. By M. C. CARMAN, B.A. pp. 156. Price 2/-. Swan, Sonnenschein & Co.

This is a guide to analysis and parsing. It is concise and simple in treatment; the definitions and explanations are shorn of all difficulties, and the exercises are good and sufficient. S. Y.

A Primer of School Method. By T. F. G. DEXTER, B.A., B.Sc., and A. H. GARLICK, B.A. pp.230. Price 2/6. Longmans, Green & Co.

This book is a text-book pure and simple, and is intended as a guide for the young teacher of a class in the elementary school. Using copiously such devices as tabulated forms, different types of prints and headings, it expounds concisely what should be done in teaching the various subjects in the elementary school curriculum. Its avowed purpose is to give method of procedure and there is little attempt to set forth the scientific or philosophical basis for the suggestions made. Common childish offences in school and how to deal with them; the different modes of punishment available; various teaching maxims are all included and are all dealt with simply and dogmatically. S. Y.

Parlons Francais. F. JULIEN. 254 pp. Price 2/6. Blackies.

A First Year of French. J. ECHANSON. 118 pp. Price 1/-. G. G. Harrop.

The first contains: 1.—Reading Lessons, half with interlinear translation (25 pp.). 2.—Conversation lessons with French and English in parallel columns (64 pp.). 3.—Grammar lessons, with usual exercises (165 pp.). There are some good suggestions, and much ground is covered, but the type generally used is smaller than is advisable.

The second is intended for quite young children, and proceeds on the now familiar lines of "All French" method, combining some of the best features of many modern books. A phonetic transcription of the earlier chapters is added. The general plan has evidently been carefully thought out, and the book can be warmly recommended.

T. G. T.

MAGAZINES RECEIVED.

Pedagogical Seminary. Worcester, Mass.
Archives de Psychologie. Geneva.
Parents' Review. Kegan, Paul and Co., London.
Educational Review. New York.
Child Life. Philip and Son, London.
School Review. Chicago.
Teachers' Institute Magazine. Kellog and Co., New York.
Indian Journal of Education.
Japanese Magazine of Child-Study.

Report of Cheltenham Conference,

May 10th to 12th, 1906.

Limited space compels us to condense to the utmost the report of the recent Conference, and to present the report in the form of notes. The addresses delivered are (with the exception of Dr. Slaughter's brilliant lecture, which we regret not to be able to report *verbatim*) printed in full elsewhere in this number.

Managing Committee :—Miss Beale, LL.D., President of the B.C.S.A. (by whose kind permission this Conference was held in the Ladies' College); G. G. Pruen, Esq., Local President; S. T. Pruen, Esq., M.D., and H. Cripps-Lawrence, Esq., M.D., Local Vice-Presidents; Miss M. A. Chevallier and Miss M. M. Elliott, Hon. Local Secretaries; assisted by the Local Committee.

PROGRAMME.

Thursday, May 10th.

7.30 p.m.—Reception in the Princess Hall, Ladies' College, by Miss Beale, the Council of the Ladies' College, and the Local Branch.

8.15 p.m.—Presidential Address by Miss Beale. Lecture by J. W. Slaughter, Esq., Ph.D., Lecturer on Psychology, University of London. Subject: "The Meaning of Interest."

Friday, May 11th.

10 a.m.—Council Meeting at the Ladies' College.

3 p.m.—General Business Meeting at the Ladies' College.

4.15 p.m. to 6 p.m.—Reception at St. Mary's Hall Training College, by Miss Reynolds and Staff.

7.30 p.m.—Reception at the Town Hall, by the Mayor of Cheltenham. Lecture by Walter Jordan, Esq., M.A., of Birmingham. Subject "The Medical Inspection of School Children." Chairman: The Mayor.

Saturday, May 12th.

10 a.m.—Meeting at the Ladies' College. Lecture by Miss Byett, of Birmingham. Subject: "Reform of Infants' Schools." Chairman: Hon. Sir John Cockburn, M.D., K.C.M.G., late Minister of Education for South Australia.

Thursday evening's Reception was characterised by the cordiality of Miss Beale, Members of the Ladies' College Council and the Local Committee. The philosophic seriousness of the Presidential Address was relieved by humorous reminiscences of the child of long ago, as depicted in literature (illustrated by Lantern Slides). Dr. Slaughter's able Lecture, representing the latest point of view of scientific investigation of Child-Nature, is reported as follows by *The Gloucestershire Echo*."

"Dr. J. W. Slaughter, Lecturer on Psychology to the University of London, then delivered a Lecture on "The Meaning of Interest," dealing with his subject clearly and ably from the standpoint of evolution in accordance with the light thrown on it by modern investigation. The modern scientific method was, he stated, that of explaining a thing in the terms of its growth. From that point of view the child was an antiquity, as old as the world itself, summing up in itself the essentials of the history of all life, and in proportion as they could spell out certain chapters in the book of life, so they could apply them to the life of the child. At some length and by means of many illustrations, he emphasised the fact that modern psycholgists regarded the three great divisons of their field of investigation—instinct, intelligence, and reason

—as a progressive development of mind——a development continuous from the beginning to the end. The human mind was in no way different from the animal mind; and behind our emotions, our prejudices, and even our higher mental processes, lurked the old instinctive impulses. From the amœba to civilised man they had perfect mental continuity, showing a continuous expansion in the range of the selective interest of mind responding to its environment. Present knowledge of child life made it clear that certain kinds of interest appeared at different periods of the child's development. He took the tendency to play truant as a reminiscence of the nomadic stage in the history of the race, and suggested that means should be found of turning these tendencies to useful account in the individual life by meeting them half-way. For instance, it might be helpful if the teacher could sometimes play truant with his pupil, and read with him in the book of nature. He proceeded to apply the principles of mental development laid down to education in general and to art and literature."

Council Meeting.

Chairman: H. Holman, Esq., H.M.I.

Delegates from Birmingham: Miss Dawes, Miss Byett; from Cheltenham: C. H. King, Esq., Dr. Eveline Cargill; from Liverpool: Miss Kelly; from London: Dr. Shuttleworth, T. G. Tibbey, Esq.; from Manchester: Miss Harrison.

Ex-officio Members: Dr. Fletcher Beach, J. Rohde, Esq., and M. Louch.

Invited Members: Miss Sturge and Miss Chevallier.

Summary of the more important details.

Greeting sent (*via* Miss Kate Stevens) to Child-Study section of N.E.A. Congress in U.S.A.

General Secretary's Report: "Number of Members, 969, *i.e.*, 78 more than in previous years. Derby Branch flags for want of Local Secretary; Miss Tuke (President) resigns. No new Branch formed this year, though interest aroused in several places. Most important matter now before Council is the proposed Amalgamation with Childhood Society. Four B.C.S.A. representatives are invited to take part in International Congress on School Hygiene, in London, August, 1907. We thank Dr. Fletcher Beach and Mr. Tibbey for work connected with the Editorship of the Magazine, which they are now resigning. Scheme of Work (drawn up at last Conference) in connection with Infant Schools has had results chiefly in Birmingham and Manchester."

Resolution carried:—"That in future General Secretary's Report shall be typed (at expense of Association), and sent two or three weeks before the Council Meeting to each delegate.

Amalgamation with Childhood Society.

Scheme drawn up by Joint Committee of Childhood Society and London Branch was presented. It was agreed, after full discussion, that principle of amalgamation had been accepted as desirable in May, 1905; principles of organisation were not suggested in scheme presented. Therefore, previous B.C.S.A. Sub-Committee was re-appointed, with power to co-opt. Chairman of Council and General Secretary were empowered to draw up more definite scheme as basis for discussion by this Committee: this scheme, after modification by Committee, to be sent to each Branch for comments; to be revised, if necessary, by the Amalgamation Committee, in accordance with suggestions made by the Branches, and to be finally submitted to the Childhood Society Council for acceptance or rejection. It was considered important that local interest and independence of Branches should be maintained, also that grades of membership should not depend on subscription.

Resolution carried (proposed last year):—"It shall be considered the duty of any Branch wishing to amalgamate with other local Societies to, first of all, notify the same to the General Secretary, and not to take any decisive steps until the Council has met and discussed the matter, and that this Council considers that this principle arises from the Rule regarding 'Constituent Societies.'"

"*Paidologist*" *Business.*

Resignation of Dr. F. Beach and Mr. Tibbey. Vote of thanks to late Editorial Committee.

Paidologist Report:—Summary of articles published in 1905-6. Suggestion that to avoid future deficit the size of Magazine be reduced to half; other suggestions to future Editorial Committee relating to wider circulation of the Magazine.

Resolution carried:—"That the General Secretary be elected in place of Dr. F. Beach, as Chairman of the Editorial Committee, and that Mr. Tibbey and Miss Young be re-elected on Editorial Committee."

Paidologist Balance Sheet. Mr. Rohde read the Magazine Balance Sheet, showing that each year there is still a deficit of from £13 to £15. He was able to report that owing to donations received from Mr. Holman, Dr. Fletcher Beach, Dr. Langdon-Down, Miss Stevens, Miss Hale, and Miss Lloyd, and to the selling of back numbers, the total deficit has been made up, and the Magazine is at present free from debt. A hearty vote of thanks was passed to the above donors.

Resolution carried:—"That size of next three Magazines be reduced to 32 pages." (It was hoped that B.C.S.A. subscribers would object less to reduced Magazine than to making up share of future deficit).

"*Pro rata* share" (see Council Meeting, 1905). Meaning defined: That each Branch shall take its share in any deficit there may be in the *Paidologist* account for the current year, and this responsibility is to be equally binding on all Branches and on every Member, regardless of subscription to the Magazine.

Library.

Mr. Tibbey read Report of Sub-Committee:—Good work done by late Librarian, Mr. Lyttelton, with B.C.S.A. books in School of Economics. Books were looked through and sorted by Mr. Tibbey and Miss Mary Louch, in March; further cataloguing should be done, either gratuitously by a Member of B.C.S.A., or by School of Economics, for remuneration. Proposal to lend books to Members on receipt of uniform postage fee, say 5d., and to invite donations towards a Library Fund. Resolutions carried:—

(1) "That the London School of Economics be elected Librarian to B.C.S.A."

(2) "That the Staff of the London School of Economics be deputed, for remuneration to be agreed upon, to do the clerical work connected with the Library." (The sum of £1 was subsequently voted as remuneration for this work.)

(3) "That a Library Sub-Committee be appointed to draw up Rules for the borrowing of books from the B.C.S.A. Library."

Mr. Tibbey, Dr. Langdon-Down, Miss Young, and Miss Mary Louch were elected on this Sub-Committee.

Capitation Fee.

The Capitation Fee for the year 1906-7 was fixed at 2d.

Extension of B.C.S.A.

The General Secretary read Report of Sub-Committee, telling of interest aroused in Bradford, and of Lectures on Child-Study in that town, but also of general opinion that no additional educational society could flourish there. Efforts to revive Derby Branch are futile until a Secretary is found. Attempts made to strengthen West Kent Branch, by formation of an East Kent Branch, not yet successful. Good prospect of Branch being formed in Glasgow. Series of pamphlets explanatory of Child-Study have been published. Request for more co-operation from Branches already established.

Resolutions Carried.

"That the Sub-Committee, consisting of Miss K. Stevens, Mr. Tibbey, and M. Louch, be re-elected," and "That two guineas be set apart from General Fund for propagation Work."

Council Members.

(Addition to Standing Orders *re* "Council.")

"That the General Secretary be empowered to invite other persons (non-delegates) to the Council Meetings at the Annual Conference (such persons not being entitled to vote), and that the Chairman be empowered to allow them to take part in discussion at his discretion or on their request."

Votes of Thanks.

Votes of thanks were passed to Miss Beale, the Cheltenham Ladies' College Council, the Hon. Local Secretaries, the Local Committee, the Mayor and Corporation of Cheltenham, all hosts and hostesses, to Mr. Holman, Mr. Rohde, Dr. Slaughter, Dr. Jordan, Miss Byett, the General Secretary, and others, who have contributed to the success of the Conference.

Conference, 1907.

An invitation was gratefully accepted to hold the next Conference in Birmingham.

At the Afternoon Public Business Meeting the following Resolution was passed with regard to the Education Bill now before Parliament, and the General Secretary was instructed to inform the Board of Education of the same:—"This Conference is of opinion that there should be an official Register of Teachers."

It was also decided that the Branches be asked to pursue the enquiry relating to Infant Schools during the current year; the same to be reported on at the next Conference.

The Afternoon Reception at St. Mary's Hall, by Miss Reynolds, Miss Roberts, and others of the Staff, was much appreciated and enjoyed.

In the evening the Mayor generously invited several hundred guests to meet the B.C.S.A. Members, in the Town Hall, where music, conversation, and refreshments made a delightful setting to Dr. Jordan's useful and practical Lecture on "The Medical Inspection of School Children."

A good morning's work was done on Saturday by Miss Byett, who, by her able and sympathetic Lecture on "Reform in Infants' Schools," was a practical illustration of the desirability of the Child-Study point of view, and by the Chairman, the Hon. Sir John Cockburn, K.C.M.G., by his inspiriting words and wise counsels.

The Conference broke up at one o'clock on Saturday.

Children in Literature.

(WITH SPECIAL REFERENCE TO THE CHILDREN OF SHAKSPERE.)

By MARY INNES.

Paper read before the Cheltenham Branch of the British Child-Study Association, on the 12th December, 1905.

(Continued from the April Number.)

Let us now turn from the most loveable of English writers, from the "Saint Charles" of more votaries than Thackeray alone, to him who "out-tops knowledge," who, like some lofty and inaccessible mountain, "spares but the cloudy border of his base to the foiled searchings of mortality."

In the works of Shakspere, belonging to a period of superb creative art, there is, as we should expect, but little recognition of the child. Yet here and there child-characters do enter into the structure of a play, chiefly, no doubt, to serve some dramatic purpose in relation to the mature members of the caste. But they have, too, a separate interest of their own, and the hand that fashioned them was that of a master.

The five children I have chosen from Shakspere's plays, who fill parts of some importance, are: Prince Arthur in *King John*, the Duke of York in *Richard III.*, Young Marcius in *Coriolanus*, The Son of Macduff in *Macbeth*, and Mamillius in *The Winter's Tale.*

In venturing to approach these wonderful children, and to subject them to a criticism based solely on personal observation, I feel guilty of an almost unpardonable act of presumption. It was my wish to procure a book which I hear has already been written on the subject,× and to purloin my remarks from some authoritative source. But my endeavours to find that book having failed, I must confine myself to the salient points that any careful reader of the plays would recognise. In the words of Mark Antony: "I tell you that which you yourselves do know." But there is no reason to prevent our once again reviving the thrilling sensations aroused on our first meeting with these children. Every great work of art exercises a perennial charm, and rewards repeated study by an increasing revelation of the secret of that charm. We need not fear disappointment in visiting once more this gallery of child-portraits.

Prince Arthur and the Duke of York stand apart as historical characters; the other three are of purely Shaksperian origin.

Prince Arthur, the unfortunate nephew of King John, strikes me as the least childlike of the whole group. In the intensely dramatic scene between himself and Hubert, when the latter is about to sear out the child's eyes, we have many

× "Children of Shakespere" by Amy Paton Wright.
A. Moring, London, 1905. 1/-.

long and moving speeches. Into these the poet has introduced (for their own sake it would seem) many passages of extreme rhetorical beauty. On the stage the tragedy of circumstance would so enthral us that probably there would be no sense of incongruity in the speeches put into this childish mouth. We should see the hired ruffians, the fire, the glowing irons, the stern, determined face of Hubert, and the tears of the defenceless child. Our excited feelings would no doubt *demand* hyperbole in the desperate, beseeching entreaties of Arthur. Word piled upon word by a sort of miraculous intervention of the gift of tongues would satisfy our own desire for expression, and we should forget their unsuitability in the mouth of a child. But deliberate argument, carefully worked out metaphors, a neatness of speech that borders on casuistry, do seem (at least when read) as quite unnatural. For instance, to Hubert's words:

* I have sworn to do it;
And with hot irons must I burn them out.

the answer is:

Ah, none but in this iron age would do it,
The iron of itself though heat red-hot,
Approaching near these eyes would drink my tears,
And quench this fiery indignation
Even i' the matter of mine innocence.

And again, when the fire is sinking during the argument:

See else yourself
There is no malice in this burning coal,
The breath of Heaven hath blown his spirit out
And strewed repentant ashes on his head.

These elaborate conceits, we can all feel, are quite out of place in the mouth of a young boy, and at such a time. But in spite of these blemishes (the play is an early one), you must remember that some very sweet childish traits are exhibited. For instance, his natural gaiety:

So I were out of prison and kept sheep
I should be merry as the day is long.

His desire for affection:

Is it my fault that I was Geoffrey's son?
No indeed is't not. And I would to Heaven
I were your son, so you would love me, Hubert.

And his own tender affection for Hubert:

Are you sick, Hubert? you look pale to-day,
In sooth I would you were a little sick;
That I might sit all night, and watch with you:
I warrant, I love you more than you do me.

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* King John—Act IV., Scene I.

And his agonised cry for some other form of torture, not that which confronts his shaking heart:

> Hubert, the utterance of a brace of tongues
> Must needs want pleading for a pair of eyes;
> Let me not hold my tongue; let me not, Hubert!
> Or Hubert, if you will, cut out my tongue,
> So I may keep mine eyes, O. spare mine eyes,
> Though to no use, but still to look on you.

And lastly, his quickly-restored trust when Hubert has relinquished his cruel design:

> O now you look like Hubert! all this while
> You were disguised.

Yet throughout the whole play this child-prince has about him the true tragic note of remoteness, and we cannot bring him into thinkable relations with our own children of to-day.

Our second historical child is the little Duke of York, in *Richard III.* The omission of his brother, young Edward V., from this list, is because he, too, is a tragic and remote figure; and the weight of kingship, already on his shoulders, robs him of most of the attributes of youth. He stands apart from the children of every-day. But the little Duke of York (his brother) positively bristles with juvenile characteristics that we know. He is the spoiled child who has escaped the "harmless and necessary" whippings which hold in check that stud of evil passions we spoke of as inhabiting even the smallest human creatures: this one is a true "Enfant Terrible," from whom (if we dared) we should always flee. Listen to him prattling to his mother and "grandam" about his Uncle Richard, the Duke of Gloucester, into whose power he so soon will fall. They are expecting the elder brother (now King as Edward V.), who is travelling from Wales to London. And the grandmother, the Duchess of York remarks:

> * (1) I long with all my heart to see the Prince:
> I hope he is much grown since last I saw him.
> *Queen.* But I hear, No; they say my son of York
> Hath almost overta'en him in his growth.
> *York.* Ay, mother, but I would not have it so.
> *Duchess.* Why, my young cousin? It is good to grow.
> *York.* Grandam, one night, as we did sit at supper,
> My Uncle Rivers talked how I did grow
> More than my brother. *Ay*, quoth my Uncle Gloster,
> Small herbs have grace; great weeds do grow apace:
> And since, methinks, I would not grow so fast,
> Because sweet flowers are slow, and weeds make haste.
> *Duchess.* Good faith, good faith, the saying did not hold
> In him that did object the same to thee:
> He was the wretched'st thing when he was young:
> So long a-growing, and so leisurely;
> And if his rule were true, he should be gracious.

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* (1) Richard III.—Act II., Scene IV.

Archbp. (sententiously)
And so, no doubt, he is, my gracious madam.
Duchess (ironically)
I hope he is; but yet let mothers doubt.

We can imagine the malicious delight of the "Enfant Terrible" as he hears the maternal criticism of Uncle Richard, and he now breaks in eagerly into the conversation:

York. Now, by my troth, if I had been remembered,
I could have given my Uncle's grace a flout,
To touch his growth nearer than he touched mine.
Duchess. Come, my young York, I pray thee, let me hear it.
York. Marry, they say, my Uncle grew so fast,
That he could gnaw a crust at two hours old;
'Twas full two years ere I could get a tooth.
Grandam, this would have been a biting jest.
Duchess. I pr'y thee, pretty York, who told thee this?
York. Grandam, his nurse.
Duchess. His nurse? Why she was dead ere thou wast born.
York. If 'twere not she, I cannot tell who told me.

Here we have all the characteristics of the precocious and dangerous little gossip who knows how to pass off his alarming revelations with the glib assurance: "I know not *who* told me."

When little York next appears, it is on the occasion of his meeting with his elder brother, the new king, in presence of their Uncle Gloucester, who, in virtue of his office as Lord Protector, holds both the boys in his power. After the greeting between the brothers, Gloucester interposes:

* (2) How fares our cousin, noble lord of York?
York. I thank you, gentle Uncle. O! my lord,
You said that idle weeds are fast in growth:
The prince, my brother, hath outgrown me far.
Gl. He hath, my lord.
York (triumphantly)
And therefore is *he* idle?
Gl. O, my fair cousin, I must not say so.
York. Then he is more beholding to you than I.
Gl. He may command me, as my Sovereign;
But you have power in me, as in a kinsman.
York (seizing the auspicious moment).
I pray you, Uncle, give me this dagger.
Gl. My dagger, little cousin? With all my heart.
"A beggar, brother," (interposes the more dignified Edward).
York. Of my *kind* uncle, that I know will give;
And, being but a toy, which is no grief to give.
Gl. (playing the part of amiable generosity, no doubt, to mask his sinister designs)
A greater gift than that I'll give you, my cousin.
York. A greater gift! O, that's the sword to it?

* * * * *

Gl. What! would you have my weapon, little lord?
York. I would, that I might thank you as you call me.
Gl. How? (*York*) Little—

Here Edward interposes, with courtly tact, trying (though in vain) to repress the irrepressible:

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* (2) Richard III.—Act III., Scene I.

Ed. My lord of York will still be cross in talk;
Uncle, your grace knows how to bear with him.

But York (breaking at last through all bounds, and fidgetting with that dagger he has wheedled out of his Uncle—you can almost see him) now stabs deep with his sharp little ungovernable tongue:

York. You mean to bear me, not to bear *with* me:—
Uncle, my brother mocks both you and me;
Because that I am little, like an ape,
He thinks that you should bear me on your shoulders.

When we remember the crook-back of Uncle Richard, it is no hard task to call up the sly twinkle in the eye of the demoniac York, as he launches this last sally.

But with all his pertness and his devouring delight in gossip, and his haughty commandiering greed, he is a bewitching and tragic little figure. He blusters like a man, but he has the timid, frightened heart of a much-cossetted little boy. The Uncle had already told Edward that they were both to be lodged in the Tower, and even Edward had protested: "*I do not like the Tower of any place.*" Now Gloucester tells both that they are at once to go there, and York cries out imploringly to his brother:

What! will you go unto the Tower my lord?

And Edward answers with assumed calmness:

My lord protector needs will have it so.

York. (not to be silenced)
I shall not sleep in quiet at the Tower.

"Why, what should you fear?" asks Uncle Gloucester.

York. Marry, my uncle Clarence's angry ghost,
My grandam told me, he was murdered there.

And so, with the sparkle extinguished in the gloom of premonition, the young Duke of York passes out to his doom. And as the boys quit the stage, Buckingham remarks to the Duke of Gloucester:

Bu. Think you, my lord, this little prating York
Was not incensed by his subtle mother
To taunt and scorn you thus opprobriously?
Gl. No doubt, no doubt! O, 'tis a parlous boy:
Bold, quick, ingenious, forward, capable;
He's all the mother's, from the top to toe.

Now these words ot Gloucester's ("He's all the mother's from the top to toe,") supply the key by which I propose to interpret the three remaining characters that I wish to bring before you. After looking into them very closely, and seeking for a ground-plan, as we may call it, of their construction, I seem to observe "likeness to the parent" as their most prominent characteristic. If this is true, it would suggest that Shakspere believed the instinct of imitation to be the chief force at work in the development of a child. By no means a new thought this, though it is sometimes obscured by the variety of other forces supposed to be at work. After all, the child is man in embryo ; the child is amorphous,—we might almost say fluid,—in the sense that no rigid symmetry has been attained, no complete and final cohesion. For this reason it is susceptible, as we know, of modification : and in the natural state this modification would be effected by the training and example of the parents. To Shakspere, who obviously regards children as elements of quite subordinate interest in the great tragi-comedy of life, the pivot round which to model their soft young developing characters, would seem to be the leading trait in the character of the father or mother, or of both. He knew nothing, we may be sure, of our modern theory of heredity, by which we can so ingeniously cast back the blame for some distasteful imperfection in our offspring on to the head of some nameless ancestor in a hazy and undiscoverable past. What he saw was the small, fragile, and impressionable bit of humanity, having within it a co-operative and receptive force, by which outer impressions were voluntarily assimilated : no mere passive receptivity, but a vehemently active receptivity, that would inevitably respond to the influences of an immediate environment.

And so the children in his plays are "poor epitomes" of their parents, to quote the epithet of Volumnia, when speaking of her grandson, "Young Marcius"; and this particular "epitome" is the next character we wish to examine.

This boy, the son of Coriolanus, speaks only once during the play, but others speak about him, and we can form a very clear conception of this pugnacious young Roman. I have heard this child spoken of with horror, as though Shakspere were responsible for his savage and furious behaviour. The impression given was that this was a typical child, and that Shakspere's power of representing children should be gauged by this one example. But Marcius is *not* a typical child : he is the son of Coriolanus, and the grandson of Volumnia. Hear how Menenius describes his father : "the tartness of his face sours ripe grapes. When he walks, he moves like an engine, and the ground shrinks before his treading. He is able to pierce a corslet with his eye, talks like a knell, and his hum is a battery. . . . He wants nothing of a God but eternity and a heaven to throne in." Then Sicinius interposes : "Yes : mercy if you report him truly." and Menenius continues : "I paint him in the character. There is no more mercy in him than there is mercy in the male tiger—that shall our poor city find."

Volumnia, his mother, speaks triumphantly of his military prowess, and imagines him in the thick of the fight, and with his mailed hand wiping his bloody brow (a horrible thought to the gentle wife). But Volumnia rebukes her sternly:

> Away you fool! *blood* more becomes a man
> Than gilt his trophy.

The young Marcius seems to me inevitable when we realize that the grandmother lived in the family circle, and that the father's warlike fame was the talk of all Rome. Here is the notorious description of the boy, from the lips of Valeria, a society lady of Rome, who is paying an afternoon call on the boy's mother and grandmother. Valeria asks: "How does your little son?" and the mother replies: "I thank your ladyship,—Well, good madam."

And then the grandmother adds proudly: "He had rather see the swords than look upon his schoolmaster" (we have heard of such boys before); and Valeria caps the grandmother's words with: "O' my word, the father's son: I'll swear t'is a very pretty boy. O' my troth, I looked upon him o' Wednesday half-an-hour together: he has such a confirmed countenance. I saw him run after a gilded butterfly; and when he caught it he let it go again; and over and over he comes, and up again; catch'd it again; or whether his fall enraged him, or how 't was, he did so set his teeth and tear it. O', I warrant how he mammockt it.!" To which piece of savagery the grandmother's complaisant comment is: "One of his father's moods."

The one speech made by this boy is when Coriolanus, hated and expelled by his fellow citizens, has joined the enemies of Rome, and is advancing to destroy it. The mother and wife of Coriolanus undertake to visit the Volscian camp and implore him to lay aside his wrath.

With them goes the boy Marcius, and he hears Volumnia plead for Rome. She urges that to tread on his own mother would be no more shameful a deed than to crush the mother-city that bare him.

And little Marcius exclaims: "He shall not tread on me: I'll run away till I'm bigger—but then I'll *fight*."

No mother's son this, but "all the father from the top to toe."

The next character on our list is the nameless son of Macduff. This child appears in Act IV., Scene 2, of *Macbeth*, and is present when Rosse informs Lady Macduff of her husband's flight to England. He hears his mother's sharp upbraidings of the man who has forsaken her at a time of such extreme danger. "He loves us not," she says.

> He wants the natural touch, for the poor wren,
> The most diminutive of birds, will fight
> Her young ones in her nest, against the owl.

When Rosse has left, she turns to her son :

Macbeth.—Act IV., Scene II.

L. Macd. Sirrah, your father's dead ;
And what will you do now ? How will you live ?
Son. As birds do, mother.
L. Macd. What, with worms and flies ?
Son. With what I get, I mean ; and so do they.
L. Macd. Poor bird ! thou'dst never fear the net nor lime,
The pit-fall, nor the gin.
Son. Why should I, mother ? Poor birds they are not set for.
My father is not dead, for all your saying.
L. Macd. Yes, he is dead ; how wilt thou do for a father ?
Son. Nay, how will you do for a husband ?
L. Macd. Why, I can buy me twenty at any market.
Son. Then you'll buy 'em to sell again.
L. Macd. Thou speak'st with all thy wit ;
And yet i' faith, with wit enough for thee.
Son. Was my father a traitor, mother ?
L. Macd. Ay, that he was.
Son. What is a traitor ?
L. Macd. Why, one that swears and lies.
Son. And be all traitors, that do so ?
L. Macd. Everyone that does so, is a traitor, and must be hanged.
Son. And must they all be hanged, that swear and lie ?
L. Macd. Everyone.
Son. Who must hang them ?
L. Macd. Why, the honest men.
Son. Then the liars and swearers are fools : for there are liars and swearers enough to beat the honest men, and hang up them.
L. Macd. Now, God help thee, poor monkey ! But how wilt thou do for a father ?
Son. If he were dead, you'd weep for him : if you would not, it were a good sign that I should quickly have a new father.
L. Macd. Poor prattler ! how thou talk'st.

Over-clever talk we are inclined to think, at first, for a young boy—too "smart," too pretentiously witty, to be natural. But we must not decide hastily : we must first carry our investigations into the parental stronghold, from whence the child must have drawn his intellectual weapons. He can parry and thrust like a trained fencer. Our question should be : "From whom has he learnt this art ?" The dialogue itself contains the answer. It is a case of mother-wit imbibed direct from the mother's own brain. She sets the mocking note, and he adopts the same key. She has given him the cue, and he responds. This cannot have been their first wager of wits. There lies a deal of practice behind such talk. And to the possible objection that women are but rarely endowed with wit, and that therefore the mother herself is unnatural, we may remind ourselves of the epidemic of epigrams that is raging among us to-day, and of the fact that these have their origin not unfrequently in the brains of women (Miss Thornycroft Fowler, for instance, who, no doubt, could hold her own with a whole phalanx of Lady

Macduffs). So this brilliant little wag may be regarded as a true son of his mother: with a touch even of her cynical contempt for human nature. How else could he have known that there are liars and swearers enough to beat the honest men and hang up them?

"Poor prattler! how thou talk'st!" are his mother's concluding words. Are we then to take these as the final verdict on the child's character? He has shown us *mind* only, a precocious mind, but there has been no hint of a heart. He has lost his father; he has heard his father abused as a traitor. Yet no word has escaped him either of grief or indignant remonstrance.

To understand him fully we must make acquaintance with the father as well as the mother. This is a more complex case than we have met with yet.

Reading ahead, we find his father in England—loyally engaged in seeking succour for the true King. And there the news comes of the murder of Lady Macduff and all her children. We can now learn how his father acted under the shock of a great grief. And we do learn it, not from what he says, but from what he does not say. Rosse has just spoken:

> Your castle is surprised; your wife and babes
> Savagely slaughtered.

And then young King Malcolm, looking at the tortured Macduff, exclaims:

> Merciful heaven!
> What, man! ne'er pull your hat upon your brows;
> Give sorrow words: the grief that does not speak
> Whispers the o'erfraught heart, and bids it break.

Even a child may learn reticence and self-restraint from a strong-souled father, and young Macduff had learned them. Under all that merry banter was hid a sorely aching heart. He had rattled on about traitors and liars and swearers with a glib tongue, as though quite indifferent to his father's name being associated with such dismal company. But when, a few minutes later, the murderers sent by Macbeth enter, and one of them dares to call his father a traitor, then the boy flies at him (impotent, yet madly brave), and shouts furiously:

> Thou liest, thou shag-haired villain.

Then falling proudly, with that cry of vindication on his lips, he adds, with thoughtful solicitude (just as his father would have done):

> He has killed me, mother—
> *Run away, I pray you.*

(To be continued.)

Changes in Handwriting during Adolescence.

By William Boyd, M.A., B.Sc.

One of the most interesting results of the work done by American investigators has been the recognition of the central place of conversion phenomena in adolescent psychology. According to Lancaster, 85 per cent. of the subjects of his inquiry underwent a religious change of some kind during the transition years from 12 to 20. This conclusion has been substantially confirmed by several psychologists.* Valuable as the result is in itself, it becomes even more significant when viewed in relation to the mental experiences of adolescence as a whole. Adolescence is the age of nascent interests: a whole world of new feelings, aspirations and thoughts reveals itself then, sometimes so calmly that their advent is unnoted, sometimes with a soul-upheaval that disturbs for the time the mental balance. So viewed, the new religious experiences are seen to be no unique events. Side by side with religious conversion are social, æsthetic and intellectual changes which though less likely to be noted at the time of their occurence, prove themselves to be akin to it not only by the manner of their happening, but also by their importance for after-life.

Following out the suggestion, that conversion (in the broad sense of the word) is one of the common events in the adolescent soul, I sought and found confirmation in biography as well as in the experience of various friends. I propose in this paper to give some of the results of one line of study.

Handwriting, as every one knows, expresses in considerable detail the character of the writer. Not only does it differ in different people, even when the training in writing has been much the same, but it differs from time to time in the same person, according to mood, season, age, etc. Obviously if a conversion change is to show itself anywhere, it may be expected to show itself in writing. Following out this view, I sought data for the inquiry in facts relating to the writing of friends and acquaintances. While many could remember nothing but the fact that their writing had undergone change some time before 20, a few had been struck by the change and were able to tell the time of its occurence to within a few months. One college friend writes thus: " I became aware of a change in the character of my writing during the latter half of my second winter session at Glasgow University. The fact impressed me considerably, so much so that I attempted to explain it to myself at the time by the rather strange theory that constant note-taking had improved my writing." In reply to further inquiry he adds: "At the time to which I referred I was nearly 19. The winter was an outstanding one in my experience. I almost felt myself growing mentally. Shakespeare and Wordsworth laid hold on me then for the first time." One or two other student friends had noted change in writing about the same age, but could not associate it with other mental changes.

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* For Bibliography see Dr. Stanley Hall: "Adolescence," II., p. 292. Prof. Starbuck's *Psychology of Religion* is of peculiar interest in this connection.

To these cases I may add two from the autobiographies of Goëthe and Harriet Martineau. That of Goëthe is in one respect like that referred to above—the sudden improvement in his writing at 17 seemed to him to call for some explanation. He found it in the fact that one of his professors insisted on care and neatness in college exercises. His autobiography gives no hint of any striking mental experiences in that year. In this respect it is in marked contrast with the case of Harriet Martineau. At the age of 20 she found her whole life changed by a new understanding of the principle of Determinism; incidentally, and in an earlier chapter, she remarks that at 20, her writing, which up to that time had been bad, changed completely and for the better.*

On these cases one or two comments may be made. In the first place, the age at which the change took place in all three was beyond the age of most frequent religious conversions, namely, 16. This seems to suggest that the handwriting change is associated with an experience which is intellectual rather than religious. I am inclined to think, however, that this conclusion is only partially true. Other cases which have come to my notice indicate that the handwriting change may take place at an earlier period; but in the latter set of cases the change takes place before reflection is developed enough to provoke mental comment at the time of change, and like many of the other occurences peculiar to adolescence, it escapes later recollection. This is borne out by the following history of an adolescent's handwriting:—

From 12 to 20 the youth in question made entries in a letter book, usually one or two a month. It should be added that as he was not constantly engaged in such work, the writing had more individuality than that of the clerk whose daily routine stereotypes the style of penmanship and makes the writing less subject to temperamental and other variations. The writing in the letter book showed an interesting development. (1.) At 12, while marked by certain individual character, it showed most plainly the influence of the previous school training. (2.) During the three following years there was no very distinct change in style. The letters were still formed in much the same way as at 12, and the general appearance was not much altered. There were more irregularities; heights were less uniform, and letters did not so often come down to the line. But the change was not greater than could be explained by the freedom from writing drill that had come with entrance to a secondary school. Perhaps, too, but more doubtfully, the writing at this stage might be said to show that clumsiness which appears in the growing boy at the prepubertal period, when the large muscles are growing more rapidly than the smaller accessory ones. (3.) Then, at 15½, there came suddenly a great change. On December 6th the writing was much the same as it had been for the previous three years. On January 8th of the new year there appeared a completely different style of writing. The writing was now of the ornate kind, which is very common both in boys and girls a year or two after puberty. The capitals, which previously had been comparatively simple, became flowing and ornamental: the looped letters, both up and down, but especially down, were formed with broad expansive loops, and beneath the signatures was the flourish characteristic of this age, not firm and restrained as in the adult, but copious and unsteady, the product of a hand and mind that had not yet found themselves. The lad himself, when questioned two or three years later did not remember any outstanding mental or spiritual experience at the time of change. Perhaps the conjecture is admissible that in a Scotch lad of a serious turn of mind, at that critical age, the new year season did not pass without making a deep impression, of which the writing change was an outward and visible sign. (4.) The new style of writing which made this sudden appearance continued with little change for over a year. Then gradually it passed into another and different style. The youth, who had few associates of his own age, spent much time in the company of an older teacher friend. Under this influence his writing made a change quite as great as the previous one, to a style almost bare in its freedom from all unnecessary strokes and flourishes. This was the result of an imitation which, though unconscious, was so successful that for a time the writing of the two was hardly distinguishable. (5.) The new style lasted for about eighteen months. Then, about the time when the youth attained the age of 18, the writing made a further gradual change, and the style that now appeared remained constant up to the last date on which I saw the writing, at which time the writer was 21 years of age. Though this new writing has a character of its own, its substructure is the writing unconsciously acquired from the older man.

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* *Harriet Martineau*: Autobiography, Vol. I., cf. p. 90 with p. 110.

While I have not been able to follow any other case so closely, my observations in school show that this is by no means an isolated case. The teacher or parent who follows the mind growth of children over several years not infrequently finds like changes in different mental provinces. A 'most interesting parallel is afforded by subjects like Shorthand, Typewriting, Telegraphing, etc., which call for a certain speed in order to gain proficiency. The student in all these cases attains a fair rate of speed and then seems to make little progress for many weeks, in spite of sustained practice; but when improvement comes it comes with a rush.* In the same way, there often comes a time in the course of essay writing when a sudden change for the better takes place. Thus the writing variation is but one instance out of many that go to prove that so far from conversion being peculiar to certain types of religious experience, it is a normal occurence in every phase of mind in the years of adolescent growth.

British Child-Study Association Reading Circles.

One of the objects which the B.C.S.A. sets before itself is the propagation of the literature of Child-Study, not as though books were, or ever could be, an entire substitute for personal observation of Child-Nature, but rather on account of the guidance they can give to those who are already observers, and of their eye-opening power to the comparatively blind. The widely-read man, though himself a dwarf, stands on a giant's shoulders and obtains a view otherwise inaccessible to him. Those of us who have the privilege of reading *The Pedagogical Seminary*, edited by Dr. Stanley Hall, have remarked the long list of consulted authorities appended to each original thesis produced by the post-graduates of Clark University. In some Universities, where research is undertaken, we understand that a student is required to read as far as possible nearly everything that has been written on his particular subject before he starts on his own voyage of discovery. "To him that hath shall be given" seems to us more true in the realm of knowledge than in any other: we read in order to know, and again we read because we know. If we appear to apologise for advocating much reading in connection with Child-Study, it is because it is sometimes said that reading interferes with originality; to a certain extent this is true, if reading be excessive to the point of satiety, but it is also true that out of emptiness nothing comes, and that fertility is conditioned by not only soil but seeds.

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* Cf. Hall: "Adolescence I., 181.

Reading Circles.—The best literature of Child-Study is generally scholarly work in which is used technical language—not understood by the laity—and the thoughts which follow each other in close and logical succession presuppose knowledge which the ordinary teacher or *père* or *mère de famille* does not possess. They feel that they need help; moreover, those who have had some training in the subjects treated delight in discussing the new ideas presented, in criticising statements, in threshing out the true, or what seems to them true, from the false. For these and other reasons Reading Circles have sometimes been formed in connection with Branches which, under certain conditions, are found helpful.

A Reading Circle is usually arranged somewhat as follows:—A small number of congenial spirits decide to meet at the house of one, or at each other's house in turn, at an hour as convenient as may be to all. A leader or president is chosen, who, to a certain extent, manages the circle. It is desirable that this leader shall have a good deal to do with the choice of the book to be read, and that any special qualification or knowledge of the subjects he or she may possess may be utilised to the advantage of all. It is also desirable that this president shall be a ready speaker, that he may keep things going when inclined to flag; and, on the other hand, that he shall have the rarer art of drawing out the more retiring and silent members of the Circle, who often have that to say which is more worth hearing than the glib utterances of the readier wit. Lastly, it is to be desired that the members of a Circle should represent various interests, that there should be parents as well as teachers, both secondary and primary, men as well as women. The actual perusal of the book chosen is probably better done privately by each individual, and meetings may be made the occasion for raising and discussing points. Papers may be written and read by the author for the criticism of others; or debates may be arranged at which every member is expected to speak for two or three minutes at least; or the opinion of other writers on some knotty point may be looked up at home and read at the meeting; or an outsider may be invited to assist on some special occasion and give the benefit of his experience or learning.

Libraries.—To facilitate study, whether in Reading Circles or in private, the Branches are strongly urged to work up Child-Study Libraries of their own. Some Branches already have small Libraries from which books may be borrowed; and we have before us a scheme for organising a first-class Library on a large scale, which shall contain all that is worth reading on the subject, and will be the property of the Association.

The following are books recommended either for Reading Circles or for private study :—

Fundamentals of Child-Study. Kirkpatrick. MacMillan and Co.
Studies in Education (2 vols.). Earl Barnes. Heath and Co. 8s.
Psychology of Childhood. Tracy. Heath and Co. 2s. 6d.
Studies of Childhood. Sully. Longmans, Green and Co. 12s. 6d.
The Child. Drummond. Temple Series. Dent and Co. 1s.
The Study of Children. Warner. MacMillan.
The Study of the Mind. Mark Baldwin. Newnes. 1s.
Notes on the Development of an Infant. Millicent Shinn. Published at Berkeley University, U.S.A.
Biography of a Baby. Millicent Shinn.
Contents of Children's Minds on Entering School. G. Stanley Hall. Kellogg and Co.
Story of the Child. Pierre Loti.

FOR ADVANCED STUDENTS.

Adolescence. G. Stanley Hall. Appleton. 31s. 6d.
Mental Development in the Child and the Race. J. M. Baldwin. MacMillan.
Pedagogical Seminary, issued four times annually. Editor, G. S. Hall. Clark University, Worcester, Massachusetts. 5 Dollars per annum.
Development of the Child. Irving King. Chicago University Press.
Fatigue. Mosso. Translated by Drummond. Swan, Sonnenschein and Co.
The Child, a Study in the Evolution of Man. A. Chamberlain. Scribners.
The Development of the Child. Oppenheim. MacMillan. 5s.

A complete Bibliography of Child-Study has been compiled by Dr. Louis N. Wilson, Clark University, Massachusetts, U.S.A.

The Library of the British Child-Study Association.

The Library of the Association is deposited at the London School of Economics, Clare Market, Kingsway, W.C., and the use of the collection by Members of the Association and others, for purposes of reference, is governed by the ordinary rules of the Library of the London School of Economics.

THE RULES OF THE LIBRARY OF THE LONDON SCHOOL OF ECONOMICS ARE :—

1.—The Library shall be open gratuitously for the purpose of study and research to (*a*) Students for the time being of the London School of Economics and Political Science. (*b*) Persons engaged in any branch of public administration in the United Kingdom or any other country. (*c*) Professors and Lecturers of any recognised University. (*d*) Such other persons as may from time to time be admitted by the Director on the recommendation of any Public Officer, Professor, Lecturer, Teacher, Foreign Ambassador, Minister or Consul, Agent General or other person of position.

(Members of the B.C.S.A. are admitted under the above rule (*d*)).

2.—The Reading Room is open at 10 a.m. daily, except as provided in Rule 3, closing at the following times:

During Term—Daily, except Saturdays, at 9 p.m.; and on Saturdays at 1 p.m.

During Vacation—Daily, except Saturdays, at 6 p.m.; and on Saturdays at 1 p.m.

3.—The Library is entirely closed on the following days:—On all Sundays; on the 1st January; on Good Friday and the five days next following; on the Saturday before Whit Monday and the four days next following; on the first fourteen days of August; on the 25th December and six days next following.

4.—The Reading Room may be closed at any time for not more than one day by order of the Trustees, provided that notice to that effect be posted up not less than one week previously in the Reading Room and in the Entrance Lobby.

5.—Readers may take the books they require for purposes of study from the shelves in the Reading Room. They must not replace the books when done with, but must leave them on the table.

6.—Cloak-rooms and Lockers are provided on the second floor, and readers are requested not to bring overcoats, hats, umbrellas or other impedimenta into the Reading Room. Parcels may be left in charge of the Porter in the Hall.

7.—No book, manuscript, or other property of the Library is in any circumstances to be taken out of the Reading Room by a reader.

8.—Silence is, as far as possible, to be preserved in the Reading Room.

9.—Anyone who shall wilfully injure the property of the Library, in any way, will be required to pay the cost of repairing or replacing the injured property, and may be debarred from further using the Library.

10.—Persons admitted to the Reading Room shall, on their first visit, sign their names in a book to be kept for that purpose, as evidence that they will conform to these Rules.

REGULATIONS FOR THE LOAN OF B.C.S.A. BOOKS FROM THE LIBRARY.

1.—Books in the collection of the Association may be borrowed for home use by Members either (*a*) by applying in person to the Superintendent of the Reading Room during the hours when the Library is open, and using a form to be obtained at the Catalogue Desk, or (*b*) when it is desired that works may be sent through the post, by applying by letter to the Hon. Gen. Secretary, Miss Mary Louch, Colbury House, Totton, Hants, enclosing fivepence in stamps for a single volume, or eightpence for more than one, and giving the exact titles of the volumes required; these will be forwarded as soon as available to any address in the United Kingdom, but not abroad. No special form of application is required.

2.—Not more than three volumes may be borrowed at one time, and three copies of a periodical shall count as one volume.

3.—Books may be retained for fifteen days, the days of issue and return each counting as one day.

4.—The loan of any work may be renewed for a further period of eight days at the discretion of the Librarian of the School of Economics, if the work has not in the meantime been asked for by another person entitled to borrow it. Applications for renewal should be addressed personally to the Superintendent of the Reading Room, or by Post Card to the Librarian at the School of Economics.

5.—Any borrower may be required to return a work after the first fifteen days if it shall have been asked for by another person entitled to borrow it.

6.—Borrowers will be held fully responsible for the safe custody and return of works borrowed by them.

7.—When a borrower is asked to return a work which he has on loan, he should do so within 24 hours, personally or by post.

The Librarian will be pleased to receive from any Members, or others interested in the work of the Association, gifts of books or pamphlets dealing with child-life and development. These should be addressed to Miss Mary Louch, Colbury House, Totton, Hants, who will, if the sender desires, pay the carriage of such parcels.

Reviews.

First Steps in Mental Growth; A Series of Studies in the Psychology of Infancy. By D. R. Major, Ph. D., Professor of Education in Ohio State University. Publishers, MacMillan. 355 pp. Price 5s.

These studies are based on a record kept by a father of his boy from birth to the end of the third year, the boy being the only child in a family of adults. Certain subjects were selected as being fundamental to the leading characteristics of developed mind. The author's purpose, as stated by himself, is to furnish data to psychologists, and to suggest to parents and teachers what and how to observe, a purpose which is admirably carried out, and we advise all who are interested in the study of child-nature to add this book to their libraries. There is little doubt that it will rank with Preyer's, Miss Shinn's and Mrs. Moore's books as one of the classics of Child-study. The reader need not be an expert in psychology to grasp its meaning; the language is simple, explanations clear, and verbal analogies illuminating. Altogether it is a most readable book, occasionally humorous, always interesting; and incidentally a great deal of elementary psychology is taught by way of leading up to more scientific and original statements, notably, perhaps, in the chapters on memory and imagination. The child in question is studied under the ordinary influences of modern training or education: it is not kept in a wild state, to its personal detriment, for scientific purposes; the necessity of preparing a child for twentieth century life, or of not removing him from his twentieth century setting, naturally interferes occasionally with the observations made. The effect of training, and the formation of habits in relation to natural inclination is, however, a feature of practical utility to the educator. Professor Major insists that functions must be studied in their natural setting, and that if isolated the interpretation will be erroneous; the aggregate of functions must be studied as a whole, though description of separate functions involves isolation and analysis; the slow development of powers is often pointed out, and the entanglement of one power with others is emphasized. Another valuable characteristic of the study is the frequent comparison made between the baby and the lower animals, also between the author's own record and those of other writers on the subject. The observations on "Number" seem particularly clearly and impartially stated; number and form words are shown to be merely names for the *things* with which number words have been connected long after the number words have been acquired. The investigation of the colour sense illustrates the difficulty of isolating a special group of observations; it is constantly complicated by the difficulties of language and the difficulty of concentrating attention on colour apart from the object in which colour inheres. Moreover, if it is true that nothing is actually seen but colour in visual percepts, then it is evident that colour must be distinguished and recognised long before it can be consciously expressed. The theory of hereditary fears is combated; the study before us suggests that fear is occasioned more by the strange and unfamiliar than by other causes. An observation we have not previously noticed in other works is the increased flow of saliva in connection with the attempt to possess desired objects during the first year, corroborating the theory that the mouth is the psychic centre of an infant. These notes, with their minute description of the early life of a child, ring true on the whole: they frequently voice our own unexpressed observations; we warmly recommend them to our readers.

M. L.

Boy and Girl; should they be educated together? By VIVIAN GREY and E. S. TYLEE. Publishers: Simpkin, Marshall, Hamilton, Kent and Co. 72 pp. Price 1s.

The authors state in the preface that the most valuable part of education is that which children give to each other. Boys and girls can be *taught* in separate schools; to educate them they must be brought together. The book is a protest against the separation of the sexes which is shown to be a mediæval innovation initiated by Catholic clerics, and the author traces the evolution of the custom from the dark ages to the present day. The schools chosen as illustrative of the system are Keswick School and Bedale's, near Petersfield. The advantages arising from co-education are summed up as follows:—Bullying and the moral difficulties with which headmasters are familiar are prevented; boys become more courteous and no less manly, girls become more brave, truthful and candid, and sentimental frivolity is discouraged; women will become better fitted for colonial life in countries where our flag too often flies over a generation of bachelors. We think the cause of co-education would have been better served if instead of discussing exclusively the too obvious advantages of co-education, the authors had brought forward the real and serious difficulties and shown by what means they could be obviated.

M. L.

The Educational Review, New York. February to June, 1906. Monthly, 1/8. 108 pages.

Of the many excellent articles in these five issues, two stand out as of importance from our point of view, one by Colin A. Scott, on "Secondhand Science and Children's Reasoning" (February), and another by Miss Julia Richman on "The Incorrigible Child" (May).

In the former the writer urges that reasoning on the part of the child should be regarded as an instinct of a very fundamental kind—in its rudiments "the hereditary résumé of ancestral experiences covering thousands of ages, during which our ancestors rubbed up against the outside world." But such reasoning "is necessarily related to the child's experiences, and he must not be tested on data which he does not feel to have a direct bearing on his interests in life." Hence he denounces the "hearsay" type of teaching, by which children learn to glibly repeat unproved statements, though these appear contradicted by facts as they observe them. The difficulty is to get down to the child's real point of view the danger lest his power of mental growth should be checked.

Miss Richman's article shows clear insight into boy nature, and a certain penetrating sympathy with these children, for whom, since their presence tended to corrupt the ordinary school, special schools had been provided, with excellent results. All were evidently abnormal, either by heredity or environment, and the analysis of causes and descriptions of methods adopted "gives one furiously to think."

T. G. T.

The Pedagogical Seminary. June, 1906. Edited by Dr. S. Hall. Kegan Paul, Trench, Trubner and Co. $1 50c. per number.

The number opens with an article on "Economical Learning," by Meyerhart, an interesting enquiry into methods of memorising by adults and children. Two papers treat of School Organisation: "Tendencies in Public School Administration," by Cutler, a comparative study having to do with school population, the distribution of school funds, and similar topics, and "Some Phases of the Internal Organisation of State Normal Schools," by Roark. "Ideals of a Group of German Children" by Goddard is a continuation of a study made by Earl Barnes and others, and an application of the same to German children. A comparison of the results obtained from studies of American, English, and German children is clearly shown by charts. The general outcome is that the German children examined compare unfavourably with American and English, but the fact that the German children in question all belong to either the peasant or lower middle-class seems sufficient to account for the inferiority of their ideals and the narrowness of their mental outlook. "The Report of the Committee on School Hygiene of the Worcester Public Education Association" contains valuable information on the subject of the cleansing of school-buildings and the medical inspection of school children. "The Importance of Comparative Psychology for Teachers," by Toshi-Yasu Kuma, is a plea for the study of experimental psychology in the laboratory by those intending to be teachers. Two papers of special interest to child-students in Britain are "Boy Life in a Massachusetts town forty years ago," by G. S Hall, and "Child-Study in Great Britain," by K. Stevens; the former being, in some degree, an autobiography of the Father of Child-Study, to whom our Association owes its being, has a personal and secondary interest to all child-students apart from that excited by the fascinating record of old New England life which Dr. Hall in boyhood days knew intimately. The latter is the paper prepared by the Hon. Secretary of our London Branch for the N.E.A. Conference at San Francisco this year, and though the subject matter is familiar to most of us we experience proud interest in the article and its author. M. L.

Archives de Psychologie. January and May, 1906. 120 pp. and 104 pp., and Index, etc. Price 4 francs each. Williams and Norgate.

The only article in these two issues of direct educational interest is that by M. Schuyten—"Sur la validité de l'enseignement intuitif primaire"—(January). Two series of six numbers were prepared and two methods adopted in presenting them. By the first, which is called the auditive, the numbers were read out to and repeated by the pupils, and then written. This was repeated three times with the same numbers. By the second the numbers were shown and read out, but not repeated, and then written. This also was repeated three times. The number of exact replies and the total number of replies given in each of the two sets of three attempts are compared for boys and girls. From a consideration of these—and the figures are given—M. Schuyten concludes that whereas he would have expected the results of the second experiment, where the numbers were seen and heard, to have been the better, those of the first, which he calls the "purely auditive," were markedly superior. Hence, he concludes that the dogma —that the more senses employed in the perception of an idea the better—is not psychologically established. And he believes his position fortified by the results of another pair of experiments, slightly varied from the first two. From these he concludes that an idea of number, in order to be perceived and retained, ought to be presented in the most concentrated manner possible.

One may be more willing to agree with his conclusions than with the validity of his experiments, for what he terms the purely auditive method is not such as he employs; in his first experiment the children not only hear but *say* the numbers; in the second they see and hear but do not say them. Motor activities have been called into play, and it is remembrance of these which probably go to give the better results in the first than in the second case. In recalling the numbers the child is guided not only by auditive impressions, but by the results of the movements of mouth and larynx that he made. In the first experiment the factors were auditive and motor, in the second, auditive and visual, and the difference of the results is not due to the fact that in the first one sense, in the second two senses were involved, but to the possible superiority of the motor over the visual, added to the fact that in the first the numbers were heard twice. Thus interpreted the experiments prove the opposite of the first conclusion, for *three* sense impressions gave superior results to *two*. And this criticism seems justified by the smaller difference between the results in the second pair of experiments.

T. G. T.

OTHER BOOKS RECEIVED.

Golden Numbers. Edited by Mrs. P. A. BARNETT. Longmans, Green & Co. 1/4.

Old-Fashioned Rhymes and Poems. Selected by Mrs. ROADKNIGHT. Longmans, Green & Co. 1/6.

Mary Wollstonecrafts. Original Stories, with an introduction, by E. V. LUCAS. Henry Frowde.

The Water-Babies. With introduction, notes and illustrations. The Clarendon Press, Oxford.

Pretty Goldlock and other Stories. 2/-.
The Elf Maiden and other Stories. 2/-.
Aladdin and other Stories. 2/6.
Trusty John and other Stories. 2/6.
} From the Fairy Books of ANDREW LANG. Longmans, Green & Co.

Old English Games and Physical Exercises. Mrs. F. KIRK. Longmans, Green & Co.

PERIODICALS.

Zeitschrift für Pädagogische Psychologie. Berlin.
Child Life. Philip & Son, London.
Parents' Review. Kegan, Paul & Co., London.
Teachers' Institute Magazine. Kellog & Co., New York

Branch Reports.

BIRMINGHAM.

President—Professor J. H. MUIRHEAD, M.A., LL.D.

Hon. Secretary—Miss A. J. DAWES, LL.A., 75, Gladstone Road, Sparkbrook.

The last session has been a very successful one for the Birmingham Branch, the Lectures having been well attended throughout. Four of these dealt with subjects suggested by the Scheme of Work drawn up at the Conference of 1905. Before that Conference, investigation had been made as to the age at which children were admitted to school in certain districts, the facilities for play, the number of children on the roll in each class-room: and the replies received as to these last were sometimes astounding. The question of sending a deputation to the Education Committee has been allowed to stand over for future consideration, but each member of this has received printed copies of Resolutions passed last December, and these have also been sent to the Secretaries of about thirty other Committees in the Midland District (Abstract).

For List of Lectures delivered during the Session see Vol. VII., page 177.

Copy of Leaflet printed and issued:—

"The special aim of the Birmingham Branch of the British Child-Study Association is that of improving the methods of education and of school conditions for young children.

"A Sub-Committee was appointed early in the year to consider the question of the Baby-Room in Elementary Schools.

"At a Meeting held at the University on December 5th, 1905, the following Resolutions were carried unanimously, and the Hon. Secretary was desired to send a copy of them to each Member of the Education Committee:—

"1.—That it is desirable for the mental and physical development of young children and the maintenance of parental responsibility to discourage the majority of parents from sending their children to school under the age of five.

"2.—That, should the Baby-Room in any area be a necessity, it should be arranged as a Nursery, with accommodation for free play and for sleep, and that the number in average attendance should not exceed thirty for each teacher so employed.

"3.—That no formal instruction be given in the Baby-Room, and no Time-Table be required, but that the aim of the teacher should be the promotion of the children's physical health and bodily development, the formation of good habits and gentle manners, and the development of intelligence through the natural method of bright surroundings, free talk, and play.

"Signed:
"J. H. MUIRHEAD, *President.*
"ANNIE J. DAWES, *Hon. Sec.*,
"75, Gladstone Road, Sparkbrook."

PROGRAMME FOR THIS SESSION.

The following Lectures will be given at the University:—

October 9th—"The Teaching of English": P. J. Hartog, Esq., B.Sc.

November 20th—"The Life-History and Latent Possibilities of the Average Slum Child": H. Bagster Wilson, Esq., M.R.C.S.

December 11th—"Story-Telling": Mrs. Muirhead.

January 22nd—"Some Experiments in the Teaching of Children beween the Ages of Eight and Ten": Miss B. Foxley (Victoria University).

February (date not fixed)—"The Meaning of Interest": J. W. Slaughter, Esq., Ph.D. (London University).

March 19th—"The Pupil as Poet": H. Holman, Esq., M.A., H.M.I., Leeds.

The Lecture on October 9th will be one of the Joint Educational Lectures.

No separate Meeting of the Child-Study Association will be held until November.

Annie J. Dawes, *Hon. Sec.*

CHELTENHAM.

President—G. G. Pruen, Esq., M.A.

Hon. Secretaries—Miss M. A. Chevallier and Miss M. M. Elliott, The Ladies' College.

The Meetings of the Twelfth Session of the Cheltenham Branch have been well attended. On each occasion the President has taken the Chair, and has opened and maintained the discussions.

The March Lecture was given by Dr. H. Cripps-Lawrence, on "Education in its Relations to Rest and Recreation." Scientific research had shown the effects of fatigue upon muscular contraction. Exhaustion was due not only to the sensation of fatigue, which might vary with habit, but also to the diminution of muscular force. Such signs as palpitation, sleeplessness, omission of words in writing, might be due to exhaustion, and followed on changes in circulation and digestion. There was danger in over-memorising, over sense-perception, and working for the market. Rest and Recreation were needed to restore mental equilibrium. The educational value of play lay in its co-ordination of joy and activity. Education sought to promote the development of spiritual unity.

The Programme for the Session has been varied, and of unusual interest. The thanks of the Branch are specially due to the Lecturers for their valuable Papers, and to Miss Beale and the Council of the Ladies' College for the loan of the Princess Hall.

Mary A. Chevallier.
Mabel M. Elliott.
Hon. Secretaries, B.C.S.A., Cheltenham Branch.
T. M. A. Cooper, Esq.,
Hon. Press Secretary.

[For Reports of earlier Lectures see Vol. VII., page 179; Vol. VIII., page 58.]

PROGRAMME FOR THIS SESSION.

October 25th—Miss Kelly—" The Vacation School."

November 20th—Dr. Shuttleworth—" Motor Training in Education."

December 4th—Mr. John Sawyer, C.C.—" Some Defects of School Life."

February 7th—Mr. Household (Sec. Education Committee Gloucestershire C. C.) on—" Some problems of Elementary Education from the Point of View of an Official."

March 14th—C. H. King, Esq.—" Children's Interest in relation to their School Subjects."

EDINBURGH.

President—Professor ALEX. DARROCH.

Hon. Secretary—Mrs. ANDREW, 27, Alva Street.

The Syllabus of Lectures this Session was so arranged that predominance should be given to topics relating to the Education of children under seven years.

The Lecture by Professor Earl Barnes, on November 21st, was attended by a greater number of people than any previous Meeting of the Association held in Edinburgh. It resulted in increased interest and membership.

The Lectures have all been practical and suggestive, and have been awakening interest in the enquiry into the Curriculum of Public Elementary Schools, which Professor Darroch, aided by Miss Liggett, is now conducting. Schedules of questions were sent to the Heads of Schools in the cities of Edinburgh and Leith, and the counties of Fife and Midlothian, as districts representative of town and rural life.

Information was asked concerning the length of time devoted to various groups of subjects, the length of the school day, and the opinion of teachers as to the place and function of the Infant Department in Schools, and also as to the advisability of admitting children under five years.

The legal school age in Scotland is seven years, and the general practice is to admit at five years. The returns showed that teachers were practically unanimous in considering this satisfactory, though a few suggested free Kindergartens for the slum districts.

In addition to the enquiry, some practical work has been done in collating the answers of children to the questions : " Which school subject is most liked, and which least ? "

Some hundreds of Papers have been worked through, and valuable suggestions have been received from the reasons assigned to the likes and dislikes.

The Committee consider this Session a most successful one. Our chief difficulty is that our subscription is not adequate to meet the expenses of the Lectures, the Capitation Fee, and the purchase and distribution of the *Paidologist*, and at present there are serious objections to raising it.

Mrs. ANDREW, *Hon. Sec.*

[For List of Lectures given during the Session see pages 58-9.]

The schedule of questions mentioned in the Report included the following :—

(1) What is the length of the school day for Infants, exclusive of the mid-day interval for meals ?

(2) What intervals for free play are included in this school day, and what is their duration ?

(3) What time per week is devoted to the following subjects :—Religious Instruction, Arithmetic, Reading and Writing, Language, Nature Knowledge, Drawing, Sewing, and Knitting, Singing, Games, and Physical Exercises, Kindergarten Occupations ?

(4) In what sense should the Infant School be a preparation for the Elementary School ? Should it aim chiefly at preparing for the primary subjects—Reading, Writing, and Arithmetic ?

(5) Would you approve of children under five years of age being admitted into the Infant School ? If so, what form of education would you propose for children between the ages of three and five years ?

(6) How many teachers in the Infant or Preparatory School have been specially trained for Kindergarten Work ?

PROGRAMME FOR THIS SESSION.

October 2nd—Special Lecture (under the Joint Auspices of the Outlook Tower Committee and the B.C.S.A.) by Dr. Stanley Hall (President of Clark University, U.S.A., Author of "Adolescence," &c.), on "The Outlook in Education," in the Gartshore Hall, 116, George Street.

October 17th—Annual General Meeting. Report on "School Curricula for Children under Seven Years": Prof. Darroch.

November 21st and December 5th—Lectures: "Occupations in Education": Prof. Geddes.

January 23rd—Report on "Children's Essays upon 'Which Subject do you Like Best ?'": Miss Scott Moncrieff, B.A.

February—Lecture: "Play": Dr. Smith.

March 23rd—Lecture: "The Myth in Children's Education": J. Davidson, Esq., M.A., D.Phil.

L. M. HARDY, *Hon. Sec.*,
5, Melville Street.

LIVERPOOL.

President—Professor SHERRINGTON.

Hon. Secretary—JOHN HAY, M.D., 12, Rodney Street.

The Members attending the Meetings throughout the Winter have averaged over sixty.

As will be seen from the Programme (see Vol. VII., page 180), a wide area has been covered. The discussion on the papers has been vigorous and free: in other words, the Branch is alive.

The Meetings of November 25th and January 27th (Miss K. Phillips and Mrs. Humphrey Ward) deserve special mention. They were held in conjunction with the Liverpool Teachers' Guild. Both Papers were intensely interesting and delightfully practical; at the same time their dominant note was one of reform. The Society considered itself most fortunate in having such able and enthusiastic exponents of "Infant Schools" and "Holiday Schools" respectively.

The Council have again to thank Professor Sherrington and the authorities of the University for the use of the Physiology Lecture Theatre in which the Meetings were held.

JOHN HAY, *Hon. Sec.*

PROGRAMME FOR THIS SESSION.

The following is the provisional programme for the next winter. The Council have decided to deal more particularly with the medical side of the subject.

"The Eye. Its development in relation to fine work. The early detection of symptoms of disease," by Hugh E. Jones, Esq., F.R.C.S.

"The Mentally Deficient," by Damer Harrisson, Esq., F.R.C.S.

"The Clothing of Children," by Miss Stansfeld.

"The Physique of the Child in Relation to its Mental Development," by Dr. Arble.

"The Chronic Ailments of Children and their Treatment," by Dr. Macalister.

"A Literary Basis of Instruction," by C. Bailey, Esq., M.A.

"The Place of Fairy Tales in the Infant School Curriculum." by Miss Evans.

LONDON.

President—Sir JOHN A. COCKBURN, K.C.M.G., M.D.

Hon. Secretary—Miss K. STEVENS, Carlisle House, Dartmouth Park Hill, N.W.

During Miss Stevens' absence in America, Miss Hart, 56, Burgoyne Road, Hurringay, N., has acted as Hon. Secretary.

The Session just closed has been most successful. With the co-operation of the Childhood Society fourteen Lectures were given, divided into Two Courses of eight and six. (Particulars of these may be found in Vol. VII., page 181; Vol. VIII. pages 60 and 61.) Non-Members were admitted to these on payment of sixpence, or of 2/6 a Course, and the sale of these tickets was sufficient to cover all the expenses incidental to the Lectures.

The Membership has reached a record total of 242, of whom 53 are new Members. The attendance at the Lectures has averaged over 70, and the after discussions have been almost invariably well maintained.

The Committee of the Branch has been strengthened by the election of Dr. Slaughter, whilst Mr. J. C. Medd has consented to become a Vice-President. We are indebted to the London County Council for permission to hold our Committee Meetings in one of the Committee Rooms of the County Halls.

Though no new investigation has been undertaken during the past session, Miss Findlay has finished, and published in the last issue of the *Paidologist*, that which she commenced in 1905; and throughout the session very successful Circle Meetings have been held by Mr. J. C. Hudson and Miss Dixon.

It is hoped that for next session a series of Lectures may be arranged dealing with the question of Children's Games and Recreation in Infant Schools, in schools for older scholars, and out of school.

The President, Sir John A. Cockburn, has been a tower of strength to the Branch, and much of the success of the past session has been due to him. We congratulate ourselves on his having consented to continue to be President for a third year.

T. G. T.

One of the most notable events in the history of this Society occurred on Friday, September 21st, when Dr. Stanley Hall delivered an Address on "The Outlook in Education" to a crowded audience in the Jehangir Hall of the London University. The fact that the meeting was able to be held was due to Sir John Cockburn, who, at very short notice, and aided chiefly by Dr. Slaughter, acting as Secretary for the occasion, made the necessary arrangements, and himself presided. Due to him also was the dinner at the Hotel Cecil, which preceded the meeting, and at which men and women prominent in London education, with some members of the London Branch Committee, had the pleasure of meeting Dr. Hall.

Members of the Branch will be pleased both to welcome Miss Stevens safely back, after her long holiday in America, and to know that Sir John Cockburn has again consented to act as President.

The Committee has agreed that the Lectures arranged for this Session shall centre, generally, round Children's Games and Recreation, widely interpreted. The three arranged for this Term are found below, under dates November 8th, November 22nd, and December 6th.

PROGRAMME FOR THIS SESSION.

Lectures and Discussions arranged by the Childhood Society and the British Child-Study Association, to be delivered in the Parkes Museum, Margaret Street, W.:—

October 18th—Annual General Meeting of the London Branch of the British Child-Study Association. Presidential Address to the Branch by the Hon. Sir John A. Cockburn, K.C.M.G., M.D.

October 23rd—Discussion on "The Medical Supervision of School-Children." Opened by Prof. H. R. Kenwood, M.B., D.P.H., Mrs. M. Scharlieb, M.D., M.S., and T. B. Hyslop, Esq., M.D. Chairman: T. J. Macnamara, Esq., M.P., LL.D.

November 1st—"The Hospital School," by Mrs. C. W. Kimmins. Chairman: Sir R. M. Hensley, J.P.

November 8th—"Children's Sense of Humour," by Prof. Earl Barnes. Chairman: A. J. Shepheard, Esq., Chairman of the Education Committee, London County Council.

November 22nd—"An Experiment in Vacation Schools." by Mrs. C. W. Kimmins. Chairman: The Hon. Sir John A. Cockburn, K.C.M.G., M.D.

December 6th—"Games and Recreation in American Schools," by Miss Kate Stevens. Chairman: Sir James Crichton-Browne, M.D., LL.D., F.R.S.

December 13th—"How Imperfect Conditions of Eyesight may be Detected and Guarded Against," by Harold Barr Grimsdale, Esq., M.B., F.R.C.S. Chairman: Sir T. Lauder Brunton, LL.D., M.D., F.R.C.P., D.Sc., V.-P.R.S.

MANCHESTER.

President—Sir WILLIAM MATHER.

Hon. Secretary—Miss F. W. HARRISON, High School for Girls, Dover Street.

During the last Session four Meetings have been held by the Manchester Branch (see list—Vol. VII., page 182; February 9th omitted).

The energies of the Branch have been directed towards the question of Infant Classes in Elementary Schools, in which the Manchester Froebel Association took a leading part. (See Memorial—Vol. VII., page 183.)

As will be seen by the Course of Papers, it can hardly be said that definite "Child-Study" has been done, and the feeling has been growing that the amalgamation with the Froebel Association, though beneficial in some ways, has had the result of practically preventing the more detailed and direct psychological Child-Study, owing to the large number of Elementary Teachers belonging to the Froebel Association. The attendance at the meetings of parents and medical men has almost ceased, and the discussions have suffered much thereby.

In consequence of this, at the last Committee Meeting it was proposed and seconded "That for the purpose of drawing up the Syllabus and other sectional business, Sectional Committees be formed, and that it be understood that alternate meetings are common to both." This was carried. The financial question was also brought up, and by the new scheme of subscription, Members will in future belong to one or both of the Associations. This will, doubtless, have the direct result of an apparent sudden drop in numbers next year.

Scale of Subscriptions:—Minimum subscription to either the B.C.S.A., Manchester Branch, or the Manchester Froebel Association, 1/6; with *Child Life*, 2/- extra; with *Paidologist*, 1/6 extra. The subscription for joint Membership to both Associations, 2/-.

F. W. HARRISON, *Hon. Sec.*

PROGRAMME FOR THIS SESSION.

October 8th—Annual Meeting. "Heredity—Physical and Social": Dr. Ashby.

November 16th—"On the Inheritance of the Physical, Moral and Intellectual Characters in Man": Prof. Karl Pearson.

December (date not fixed)—"Froebel's Contribution to Social Progress": Miss Penstone.

January—Social at the John Rylands' Library.

February 15th—"Pupils as Poets": H. Holman, Esq., H.M.I.

March 18th—"The Influences of Training in the Early Stages of Life": Prof. Hickson.

WEST KENT.

President—Dr. Hamilton Hall.

Hon. Secretary—Miss F. M. Watt, 22, Monson Colonnade,
Tunbridge Wells.

This Branch is now fairly started: we were inaugurated in December, 1904, and with the help of the London Branch we made a good beginning, and hope for its continued interest.

For our first independent Session we may say this has been a successful one. Last year, on application for affiliation, we reported a Membership of 31. We have had this Session five resignations, from various causes, and fourteen new Members, so we have now forty Members, and some promises for next Session.

We had an excellent series of Lectures, and are very much indebted to those who so kindly lectured for us (see Vol. VII., page 184).

On March 24th we had a fascinating Address from Professor Earl Barnes on "What Children think about the Subjects they Study," which has aroused much more interest in the subject, and we hope will result in increased Membership.

We were very unfortunate in weather for most of our Lectures, so audiences have been small on the whole, but the Lecturers who had small audiences will be glad to know that owing to their Lectures interest in the town is very much greater than a year ago. In fact, we are supposed to be quite a success.

Owing to various causes we have not been able to do anything about the Scheme of Work, though some attempts were made in the early part of the Session.

Next Session we expect to arrange for a Lecture once a month—October to March.

F. M. Watt, *Hon. Secretary.*

PROGRAMME FOR THIS SESSION.

The Meetings of this Branch are to be held at the Town Hall, Tunbridge Wells.

October 16th—Annual General Meeting. Address by the Hon. Sir John Cockburn, K.C.M.G., M.D.: "Joy in Work." Chairman: His Worship The Mayor.

November 13th—"The Hygiene of the School and Scholar," by the Rev. J. O. Bevan, M.A., F.S.A, Examiner to the College of Preceptors. Chairman: J. S. Phillpotts, Esq., M.A., B.C.L.

December 11th—"Gymnastics for Children," by Mrs. Hammerton Gill (pupil of Mme. Bergmann Oasterberg). Chairman—Mrs. Griffith-Boscawen.

January 16th—"Nutrition in Child-Life," by Miss Constance Barker, Principal of St. Christopher's, late Lecturer on Hygiene to East Sussex County Council. Chairman: Dr. Hamilton Hall.

February 10th—"The Relative Advantages and Disadvantages of a Boy at School being a Boarder or a Day Boy," by the Rev. C. C. Tancock, D.D. Chairman: The Right Hon. Sir Wm. Hart-Dyke, Bart., P.C., M.A.

March —"The Child Pianist," by Mrs. A. J. Curwen. (At St. Clair, Frant Road, by kind invitation of Miss Vickery.) Chairman: The Rev. A. W. Oliver, M.A.

Vol. VII. No. 1. *February, 1905.*

THE PAIDOLOGIST:

The Organ of the British Child-Study Association.

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Library—

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